THE

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OF

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A MONTHLY RECORD OF THE MEDICAL AND AUXILIARY SCIENCES.

तदेव युक्तं भैषज्यं यदारोग्याय कल्पते ।
सचैव भिषजां श्रेष्ठो रोगेभ्यो यः प्रमोचयेत् ॥
चरकसंहिता ।

That alone is the right medicine which can remove disease:
He alone is the true physician who can restore health.–
Charaka Sanhitá.

EDITED BY

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THE MATERIA MEDICA

33 —CINNABARIS (VERMILION)

(Concluded from p 420)

Hypochondrium and Abdomen: -

An increased flow of saliva the second day, the same day, from 4 to 5 o'clock P M, a severe pain extending from the cartilage of the seventh rib, at its junction with the sternum to the right hypochondriac region under the inferior border of the tenth rib (J C R, 30th)

In the morning on rising, shooting pain in the right lobe of the liver (C Hg, 3d)

Nausea, with occasional throbbing in the left hypochondrium, abdomen distended, stools hard, and too large (A J B, 6th)

Soon after taking the 6th dilution, *aching and somewhat sharp pain in the left hypochondrium, in front, over a space as large as may be covered by the hands*, worse in moving about in the open air *Pain soon extending around the lower border of the ribs behind, and to region of left kidney, where it seems dull, and somewhat oppressive* (all felt, and disappeared in four hours) Soon after this, appearing in *the right hypochondrium in front, and extending around to back, and region of right kidney, where the pain is of the same character as* *the left kidney.* The dull pressive pain is felt in one ,and then in the other region of the kidney, alternately.

The pains intermit in severity, and those in the hypochondria are relieved by bending forward (H. R.).

He had, also, pains of short duration in the right hypochondrium, in middle of left breast, in front, in left kidney, and in occiput; itching over the body at times. In the evening, sticking pain in the region of the *left side* of fifth and sixth dorsal vertebræ; a sore spot which he felt on the third day after second trituration, on the right side of seventh and eighth rib, as large as a wafer, with a sore pain in and around it, continues: during the day, there were pains at a corresponding spot on the left side, of the same character, but without a sore spot. These last pains, which commenced on the 5th of January, were felt occasionally, until the 27th (H. R., 2d).

The prover remarks, that of all the pains which he experienced during his proving, the most severe were those in the hypochondria and kidneys (H. R.).

In four hours alter taking the medicine, a sharp steady pain in the forehead, mostly in the right orbital region; soon after felt a sharp throbbing in the left hypochondrium, in the region of the spleen, and six hours afterwards he felt a dull aching pain in the bones of the forearms and legs (A. J. B., 3d).

Pain in the upper part of the left and right lungs; an inward soreness over the heart, extending along the left arm on taking a long breath. Mucus which is thrown up, tastes like old tallow mixed with coffee. Pain under the lower point of the sternum, extending to the left side under the short ribs (J. H. H., 6th).

*In diseases of the spleen (melancholy?) (Ktz.).

Pinching in the abdomen the second day (B.).

Pinching in abdomen above and across the colon, with frequent emissions of flatulence of a fœtid odor, afterwards a passage the first day (C. Hg.).

Drawing pain in the abdomen for three hours in the forenoon, at 10½ o'clock (B.).

*Griping colic (Ktz.).

Some griping in the bowels, the only symptom with a man, who often took the 3d trit. (B.).

Pain in the forehead. Sticking in the chest, just beneath the sternum. Griping pain in the bowels (J. M. R., 6th).

(After eating pickled oysters and drinking cold water, pain in the left side of the abdomen, and much belching, without relief) (C. Hg.).

Pain in the lower part of the abdomen, attended with diarrhœa, and also flatulence after taking the first dose (colic from eating boiled cabbage (J. H. H., 6th).

During the first day and second night after taking the medicine, he was troubled with aching pains in the thighs, soreness in the umbilical region, obliging him to turn during the night as well as during the day. A weak sensation in the left eye, the same day (A. L., 6th).

Pains in the head in the forenoon, with a disposition to fall asleep while trying to listen to lectures several times, notwithstanding his making a great effort to keep awake. Constrictive feeling in the umbilical region, urine tinged yellow (A. J. B., 3d, 3d day).

Shooting pain in the bowels at intervals during the day. Flashes of heat, confined to the abdomen, with great flatulence, more in the forenoon, and less in the afternoon and evening (J. L. M., $\frac{1}{10}$, 1st day).

Pain in the bowels before each evacuation (J. L. M., 2d day).

Three or four hours after taking the medicine in the morning, his abdomen, below the transverse colon, felt hot, his tongue is covered with a white fur, and there is a beating, burning, in both temples, which he felt all day (S. A., 2d).

Six hours after taking the 2d trit., a rumbling through his abdomen below the transverse colon, lasting about one hour and a half (S. A.).

Upon lying down at night, there were rumblings in the abdomen, and pains passing from the epigastric to the pubic region. There was also, nausea and uneasiness in the stomach (J. P. D., 3d).

Chilliness in the warm room; an uneasy, indescribable feeling in the abdomen (A. J. B., 1st day, 3d).

Sensation as if the abdomen was too large, and wishes to have everything loose about his bowels; numb pressing pain in the eyes; numb feeling in the elbow, as if the ulnar nerve was compressed; also numbness in the knee-joints; pain in the forehead; sticking in the chest, just beneath the sternum; griping pain in the bowels. The pulse, which was at 12 o'clock A. M., from 44 to 52, rose at 4 o'clock to 80 (J. M. R., 6th).

Slight inclination for stool in the forenoon, but no evacuation the first day (C. Hg.).

After taking daily the 3d trit. and during the first days he is costive; after a week the bowels are loose (B.).

The seventh and eighth day no passage; the ninth a regular evacuation after violent straining, preceded by much wind; afterwards prolapsus of the rectum, with pain until evening (C. Hg.).

Has been disposed to costiveness during the whole time of taking the medicine (H. R., 6th and 2d).

Constipation; only one passage a week (Nd., 1st).

Nausea, with occasional throbbing in the left hypochondrium; abdomen distended; stools hard and too large (A. J. B., 6th).

Pain on the seventh rib of each side in a spot as large as a quarter of a dollar; more on the left side. Violent constipation, lasting all the time he took the medicine, and for a long time after ceasing to take any. Bleeding piles for two days; violent itching in the anus, worse at night in bed; a whitish furred tongue in the morning (J. H. H., 6th).

Soft scanty stools twice a day, preceded by pinching; less afterwards (H.).

Unusual drowsiness in the morning; in the afternoon two passages of the bowels, the last one with straining (Nd., 5th).

Two passages daily (H.).

(Diarrhœa after eating cheese; afterwards great lassitude, the 4th day) (C. Hg.).

The second day thinner stools than usual (C. Hg.).

* Bloody dysentery (Ktz.).

Slight flatulency, with a sensation as if there was to follow a large evacuation, in the forenoon (C. Hg.).

In the evening a sensation of approaching looseness of the bowels (H. R., 2d, 1st day).

In the morning, after rising, a loose passage, with burning in the anus, preceded by griping (Nd., 3d).

Little pimples around the anus, with burning and itching; thin stools and tenesmus (B.).

After the afternoon stools, sensation of formication in the anus, as if from a large worm, 1st day (C. Hg.).

After dinner he had a feeling of weight in the lower part of the rectum, and a sensation like aching (H. R., 2d, 9th day).

* Less protrusion of the anus during the stool the first day (C. Hg.).

Urinary Organs.—

Increased urination (3d, L.).

Frequent and increased emission of watery urine; also two or three times in the night (4th, L.).

A great increase of the flow of urine and saliva, lasting one hour, with shooting pain on the left side of the head, from the occiput to the forehead; flow of tears (Nd., 6th).

Increased urination (C. Hg., 3d).

Diminished secretion in the night (1st day, C. Hg.).

Scanty urine the second and third day (C. Hg.).

Film on the urine (3d, L.).

Flaky sediment in the urine (3d, L).

Turbid urine (J. M. R., 6th).

Pain as if from a sore in the urethra when urinating, although the urethra is painless on pressure (H.).

Itching in the urethra in the afternoon (Nd., 3d).

Sensation as if there was a raw spot in the centre of the urethra, which woke him up two nights in succession (J. H. H., 6th).

* Gonorrhœa of very long standing, with much pain during urination, and soreness; the discharge is of a yellowish green color (Berens).

Male Genital Organs:--

A heat apparently proceeding from the genital organs, which, however, are not hot; in the summer the eighth day (C. Hg.).

Sudden and violent twitching pain through the right testicle, and in the spermatic cord in the evening (1st day; C. Hg.).

Twitching in the penis (H.).

The penis is swollen (H.).

Redness and swelling of the prepuce, having the appearance of a sore with painful itching (H.).

(Small warts on the prepuce in different places, which bleed on being touched) (H.).

Sycosis (Noack and Trinks).

Itching pain behind the corona glandis, from which exudes matter of a disagreeably sweet smell (H.).

Violent itching of the corona glandis, with a profuse secretion of pus; the itching was so violent as to cause him to rub it, which only eased it for a short time, when it returned with tenfold violence; two small red spots made their appearance on each side of the glans, secreting a large quantity of lardaceous matter. It had the appearance, according to his opinion, of herpes preputialis (J. H. H., 6th).

Blenorrhœa of the glans penis (Noack and Trinks).

Tearing stitches in the glans penis (H.).

Small shining red points on the glans penis (H.).

In the evening burning pricking itching on the extremity of the glans penis, which disappears on rubbing, but soon returns again with greater force (H.).

* It is used externally in syphilis (Ktz.).

Strong erections during the night in bed (H.).

Strong erections after midnight, towards morning (Nd., 3d; 3d day).

The seventh day, in the morning, a very violent erection, almost amounting to priapism (C. Hg.).

Profuse sweating between the thighs; violent erections in the evening. After finishing the medicine, all desire for an embrace is lost, which was not the case before he took the medicine (J. H. H., 6th).

A still more aggravated morbid state of mind, fretfulness; also sexual excitement at the least provocation (4th day, Rt., 30th).

In the afternoon sexual excitement, as if he were to have an emission, but was able to combat the feeling (2d day, Rt., 3d).

Strong sexual desires, with much appetite (H.).

Increase of sexual desire, and prolonged orgasm during the coitus (C. Hg.).

For two mornings an almost irresistible sexual desire the seventh and eighth day (C. Hg.).

Frequently a spiritual sexual desire, with no inclination for its gratification first and third day (C. Hg.).

Sudden paroxysms of spiritual erotomania third day (C. Hg.).

A pollution of a copious quantity of inodorous semen the eighth day (C. Hg.).

From the seventeenth to the twenty-third almost daily a pollution (C. Hg.).

On Tuesday night he took forty glob. On Wednesday night sixty glob. of 30th. On Thursday night five gr. of $\frac{1}{10}$, and on Friday night ten gr. of $\frac{1}{10}$, with no perceptible effect until Saturday, when there was increased sexual desire with erections, which continued during the night, terminating by an emission of semen (J. C. R.).

Female Sexual Organs:—

Catamenia appear a day too early. Observed several times (B.).

* A few days before the appearance of the catamenia, and during its continuance; tearing pain in the forehead; sensation of weakness in the eyes; rending pain in the spine; tearing pains and cramps in the bowels, with diarrhœa; also great prostration (B.).

Leucorrhœa, causing during its discharge a pressing in the vagina (H.).

* Uterine difficulties, which cannot be relieved by opiates (Ktz.).

Nasal mucous Membranes, Cough, and Chest:—

Symptoms of cold in the head, with lameness of the thighs; much mucus, in lumps of a dirty yellow color, in the posterior nares during the whole week (A. L., 6th).

Symptoms of cold in the head; fulness of the head; discharge of much mucus from the nostrils; aching pain in the small of the back and legs (A. L., 3d; 3d day).

A great deal of cold in the head (H.).

A good deal of mucus at the posterior nares, which comes away in lumps (D. W., 6th; 2d day).

Flow of mucus from the right nostril, lasting for three days (J. H. H., 6th).

Cough, from tickling in the throat, the third day (B.).

Dryness in the mouth; burning in throat and the whole breast, with general weakness, tickling in the throat, and disposition to cough (14th, C. Hg.).

Cough, which seems to proceed neither from the breast nor from the larynx, but from the upper part of the throat, in the morning of the second day (C. Hg.).

(On lying down she has to cough continually; less on sitting up; single paroxysms of cough, perfectly dry) (H.).

(Every evening hoarseness, with croup-like cough) (J. H. H., 6th).

Hoarseness of the voice in the morning, going off in two or three hours (J. L. M., 2d).

Much yawning (14th, B.).

In the forenoon, while riding in the open air, very frequent slight yawning, with chilliness. As soon as he enters a warm room it disappears, during warm autumn weather (C. Hg.).

Chest somewhat oppressed; larynx asthmatic, in the morning of second day (C. Hg.).

After conversation a pressure in the upper and central part of the chest, which renders breathing laborious; he is obliged to bend forward, in order to inhale sufficient air; the forenoon (C. Hg.).

The chest often seems contracted, as though pressed upon; he is obliged to stretch himself, in order to breathe easily; the first and eighth day, only during day and particularly in the forenoon (C. Hg.).

He awakes suddenly after midnight as if from a dream, as if he has no breath; a state resembling nightmare (H.).

Half an hour after taking the medicine, dyspnœa with heat, the same morning violent pains in all the limbs, commencing in the points of the fingers, and worse in the left side; at the same time weakness, burning in the throat and breast; dryness of the mouth and cough, incited by tickling in the throat (i 4, Fr. Husmann).

At five o'clock in the afternoon pressing pain in the centre of the chest, similar to a cramp of the stomach, to which she formerly had been subject. The pain extends to the throat and between the shoulders, and lasted until night, The spot was still sensitive on the following day (B.).

Sticking pain in the chest, just beneath the sternum (J. M. R., 6th).

Pain in the upper part of the left and right lung; an inward soreness over the heart, extending along the left arm, and on taking a long breath. Mucus, which is thrown up, tastes like old tallow mixed with coffee. Pain under the lower point of the sternum, extending to the left side under the short ribs (J. H. H., 6th).

From 4 to 5 o'clock P. M., after taking the medicine (30th dil.) the previous evening, a severe pain, extending from the cartilage of the seventh rib, at its junction with the sternum, to the right hypochondrium under the inferior border of the tenth rib. After two more doses of the 30th, and two of $\frac{1}{10}$, in four nights, and then again one of the 30th, he had on the 6th day occasional pains in the left side of the chest between the cartilages of the fifth and sixth ribs, and without another dose on the seventh day; in the evening again a return of the pains in the left side of the chest in the region of the heart, of a sharp cutting character, producing a difficulty of getting breath while they continued. On the eighth day, forenoon, again a return of the sharp cutting pain in the region of the heart, followed by wandering pains throughout the whole chest (J. C. R.).

Pain on the seventh rib of each side, in a spot as large as a quarter of a dollar, more on the left side (J. H. H., 6th).

An increase of the flow of saliva, and a pain running near the ensiform cartilage, from the seventh rib on the right side diagonally through the chest (Nd., 30th).

The fourth day, after 2d trit., itching on the body and canthi, and a spot on the right side on one of the ribs (7th or 8th) as large as a wafer, very sore to touch, with occasionally a sore pain in and around it, which continues for three or four days.

During the fifth day there were pains at a corresponding spot on the left side of the same character as the pain connected with the other, but without a sore spot.

On the fifth day, after 2d in the morning, there were also pains of short duration in the right hypochondrium, in middle of left breast in front, in the left kidney, and also in occiput (H. R.).

(In the evening nervous trembling of the heart with anxiety, to which she had formerly been subject, again returns) (Nd., 6th).

Within ten minutes after taking 14th, a very severe pain in the heart, as if it was twisted around (C. Hg.).

Soreness under the right breast, near the last true rib, particularly on drawing breath (Nd., 1st).

(A stitch about the eighth rib, particularly on taking a long breath, occasionally on the fourth day) (Nd., 3d).

At five o'clock A.M., a peculiar agreeable sensation of exhilaration, with fulness, extending from all sides of the chest, particularly the thorax, towards the stomach and heart, accompanied or followed by a similar sensation in all the joints, continuing with intermissions till eight o'clock* (C. F. T., 2d day : 5th).

Back and Kidneys:—

On turning the head, pain in the right side of the neck, below the sterno-cleido-mastoideus muscle. Pain in the back part of the neck when the head is thrown back, extending to the occiput. The muscles of the back part of the neck seem as if contracted (J. H. H., 6th).

Eruption on posterior cervical region, and soreness from the right ear into the middle of posterior cervical region, as if the glands were affected, second day. This soreness increased on the third day, and was very severe in the evening. It continued until seventh day, but gradually decreased in severity (Rt., 6th).

About 4 A.M., the fifth day after taking second, he was awakened by a dull sticking pain in the region of left kidney, which lasted but a short time; afterwards tossing about and sleeplessness for an hour; after rising from bed, a fulness and pressure in the occiput and back of the neck, continuing with much severity till about noon, after which, the symptoms somewhat abated: heaviness and sleepiness during the day; pains of short duration in the right hypochondrium, in middle of left breast, in front of left kidney, occiput; itching over the body at times. The pains experienced in the hypochondria and kidneys were most severe.

In the evening of the same day, sticking pain in the region of the left side of the fifth and sixth dorsal vertebræ; the sore spot on right side, felt two days previously on one of the ribs (seventh and eighth), as large as a wafer, and sore to touch, with occasionally a sore pain in and around it, continues; during the day there were pains at a corresponding spot on the left side, of the same character as the pain connected with the other, but without a *sore* spot.

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* Considering the previous state of the prover, these symptoms may probably be considered curative.

The sixth day after 2d trit., occasionally a sticking pain on the right side of the same dorsal vertebræ (fifth or sixth); pain sometimes in the left side of occiput (organ of amativeness), itching of eyelids and of various parts of the body; sore spot in the right side continues. The pains on the side of the fifth and sixth dorsal vertebræ have been occasionally felt until the eighth day (H. R.).

In ten minutes after taking the 3d trit. at night, he felt a warm glow through his legs, which was soon succeeded by a dull pain in the left arm just above the elbow, and by occasional darting pains in the lower extremities. There was also a dull pain in the lower dorsal portion of the spine, continuing only for a short time. A space about the size of a quarter dollar, just above and between the supra-orbital ridges, felt as though pressed upon by a cold metallic body, while within the cranium underneath, there seemed to be more warmth than usual (J. P. D.).

The third night, after taking the 3d trit., he had restless sleep, with many dreams, and feels tired in the morning, with aching across the small of back, and limbs. This pain continues the fourth, fifth, and sixth day. Again, all the seventh night and next day, he had severe aching and drawing pains in the back, from the region of the kidneys to sacrum, and in the thighs and legs. Drawing up the legs affords relief. The eighth day, also, slight pains in the back and legs, but much better than the day before. All these symptoms from one dose of 3d (A. L.).

Soon after taking the sixth dilution, *an aching and somewhat sharp pain in the left hypochondrium, in front, over a space as large as may be covered by the hand, worse on moving about and in the open air. Pain soon extending around the lower border of the ribs behind, and to region of the left kidney, where it seems dull, and somewhat oppressive* (all felt and disappeared in four hours). Soon after this, appearing in *right* hypochondrium in front, and extending around to the back and region of right kidney, where the pain is of the same character as in the left kidney.

The dull pressive pain is felt in one and then in the other region of the kidney, alternately. The pains intermit in severity, and those in the hypochondria are relieved by bending forward (H. R.).

One hour after taking the sixth dil., rush of blood to the back part of the head, attended with violent itching and heat, extending to each ear, and behind the left ear ; there came three hard lumps, one the size of a small shot, the other that of a buckshot, and the last a size larger. On the same night, he felt a sharp pain in the region of the kidneys, as if some one had driven a nail on each side of the vertebræ. More profuse discharge of clear water (J. H. H.).

General pain all over the back, down the loins, worse after every dose of medicine, aggravated on drawing a long breath (J. H. H., 6th).

Sore feeling, extending from the small of the back around both sides, over the ossa ilii, worse on pressure (J. H. H., 6th).

Aching in the small of the back, as if bruised (Nd., 5th).

Shooting pain in the region of the loins and sacrum, increased by stooping, and during labor (B.).

Tearing pains in the back from above downwards at 11 o'clock in the evening and through the night, so that she could get no sleep ; second day (B.).

Rending tearing pain in the side of the back, as if it was broken, particularly at night, upon the least motion in bed, and in the arm when writing ; these pains are relieved by the warmth of the stove (H.).

Upper Extremities:—

Pain in the left shoulder, between the clavicle and scapula, interiorly, the first day (C.Hg.).

In the evening of the second day occasional shootings in the upper part of the left temple along temporal ridge ; dulness in the whole head, especially in the forehead just over the eyes ; lame sensation in the right shoulder-joint (H. R. 6th).

After taking the medicine in the morning towards 10 o'clock, a pressing pain in the right shoulder, as from a blow, which continued for half an hour, then pain in the abdomen (B.).

Sudden pain in the middle of the upper part of the right arm, as though it would fracture, the third day (C. Hg.).

Pressing gnawing pains in the upper part of the right arm, as if they were moving about in the bones to and fro in the forenoon of the fifth day (C. Hg.).

Violent shooting pains in the arms at times (H.).

Shooting pain in the muscles of the inner side of right os humeri early in the morning, after rising the third day (B.).

Shooting pain on the outer side of the right fore-arm, from 4 o'clock P.M., until bed time (the 3d day, B.).

He was awakened several times from sleep by a severe pain in the right arm. It continued in the morning and during the day, at times very severe, commencing about the centre of the os humeri, and extending to the elbow and along the radius to its inferior extremity; the pain was of a heavy, aching character, deep-seated, and caused lameness and difficulty in moving the arm. In the forenoon he had also a return of the sharp-cutting pains in the region of the heart, followed by wandering pains throughout the whole chest (J. C. R., 3d day, 30th dil., and after several larger doses previously taken).

Sensation of lameness in the right arm, the eighth day; the day before, wandering pains as if in the bone and pressing in the muscles (C. Hg.).

In the evening numbness of the arm on which he lies and supports himself, until the 13th day (C. Hg.).

Four hours after taking the 3d trit. he felt a sharp steady pain in the forehead, mostly in the right orbital region; soon after felt a sharp throbbing in the left hypochondrium, in the region of the spleen, and in about ten hours after the above dose, at ten o'clock P.M., he felt a dull aching pain in the bones of the forearms and legs.

Taking three days afterwards another dose of the same trit., at 11 o'clock A.M., he felt in half an hour a sharp aching pain in the right supra-orbital region, shooting backwards and downwards to the ear and side of the neck. Front of the head very hot; the pain is worse in the warm room, and on moving the eyes and scalp; chilliness in the warm room; an uneasy indescribable feeling in the abdomen; numbness of the left arm, from the elbow down to the end of the little finger. Next morning all the symptoms are better, but in the evening, at 8 P.M., the headache, which had increased at 10 o'clock the previous evening to a heavy, stupefying ache, aggravated by thinking, reading and pressure, returned with a numbness and heavy aching in the arms and knees and lower legs, without a new dose being taken that day. The pains are all aggravated in the evening; better in the open air, and after eating and sleeping (A. J. B.).

Dull aching in the bones of the forearms and legs; numbness of the left arm, from the elbow to the end of the little finger, passing off on using the arm, and returning again while at rest (A. J. B., 1st day; 6th).

Pain in the left side of the head, temple and supra-orbital ridge; sensation as if the abdomen was too large; he wishes to have everything loose about it; numb pressing pain in the eyes; numb feeling in the elbows, as if the ulnar nerve was compressed; also numbness in the knee-joints; hands cold (J. M. R., 6th; 1st day).

In ten minutes after taking the 3d trit. in the evening, he felt a warm glow through his legs, which was soon succeeded by a dull pain in the left arm just above the elbow, and by occasional darting pains in the lower extremities. There was also a dull pain in the lower dorsal vertebræ of the spine, continuing only for a short time. A space about the size of a quarter of a dollar just above and between the supra-orbital ridges, felt as though pressed upon by a cold metallic body; while within the cranium underneath, there seemed to be more warmth than usual. * A dull pain felt before in the left temple and side of the forehead disappeared—urgent desire to urinate (J. P. D.).

Pain along the left arm, particularly in the little finger, third finger and thumb. On supinating the forearm, the pain is worse at the elbow. It feels as if the "crazy bone" was struck. The least twitch causes the elbow and shoulder to crack. Itching in the palms of the right hand. Pain in the little finger of right hand. Itching in the joint of right hand. Pain in the little finger of right hand. Itching in the joint of right hand (J. H. H. 6th).

A constant pain in the left arm-joint when turning and straightening the arm, and when writing (J. H.H. 6th).

In about an hour after taking 30th, sharp darting pains like electric flashes passing from the first phalanx of the ring-finger of the right hand to the middle of the forearm, and from the lower extremity of the radius of the left arm up to the elbow (J. C. R.).

The first joint of the right index-finger red and hot, but painless; next morning chill, with perspiration under the arms; cannot get warm, even near a hot stove (3d L.).

Joint of the first finger of right hand is red and hot (4th L.).

Pain in the left thumb, as if pierced by splinters of glass; (six or eight weeks before he had wounded his thumb with glass) (the 3d day, C. Hg.).

In two hours after taking the medicine a fulness and general pressure in the whole head, as after taking cold, with dull aching pain in the region of benevolence; better in the open air; *great drowsiness and lassitude in the warm room.* Occasional shooting and prickling pain in the two middle fingers of left hand, better by firm pressure upon the thumb. The above symptoms continued about eight hours (C. L. M. 6th).

Lower extremities:—

During the first night after taking the 6th dilution, drawing, aching pains in the thighs from the hip-joints nearly down to the condyles, aggravated by moving, and accompanied with great lameness, experienced on getting up and attempting to walk; getting better after walking a short distance. The two following days, symptoms of cold in the head, with lameness of the thighs (A. L.).

Two hours after taking the 6th dil. in the morning, on straining at stool, shooting aching pain on posterior side of right thigh, from the hip-joint to middle of os femoris.

After a new dose of the 6th in the evening, a day after taking the last dose, he was troubled next day and night with aching pains in the thighs, soreness in the umbilical region, obliging him to turn during the night as well as during the following day. Also violent itching and pricking in the inner side of the knee-joint, ever since he has commenced to take the medicine; worse in the night and the morning before getting up.

The 5th day, violent itching on the inside of the thighs, knees and legs, worse at the knees, especially at night (A. L.).

From the 2d to the 5th day after the 3d trit., aching pains in the small of the back and legs, with uncommon tiredness and weakness, and on the fifth night and sixth day severe aching and drawing pains in the back, from the region of the kidneys to sacrum and in the thighs. Drawing up of the legs affords relief. The pains in the back and legs still continued in a slight degree on the 6th day (A. L.).

Tearing pains from the right hip-bone to the great toe, commencing at 9 o'clock in the evening, lasting through the night, and only diminished in the morning after rising (B.).

At 10¼ P.M., after taking the 3d decimal trit. in the morning, pain and tired feeling in the right hip, and afterwards in the left. Tired feeling in all the joints of the lower extremites, better from rising and walking; sensation of having taken cold and general feeling as not being fit for any mental labor, depressed; melancholy, cynical, state of mind; nervous system excited.

On the fourth night itching, especially on the inside of the thighs (Rt.).

An eruption on the inner and lower part of the thigh, with itching (D. W. 6th, 2d day).

Fetid and excoriating perspiration between the thighs when walking (H.).

Profuse sweating between the thighs (J. H. H. 6th).

Tearing pain in the left thigh bone the whole day (3d L.).

Tearing in the right thigh bone (4th L.).

(Rheumatic) pain of right knee-joint, increasing for two weeks, aggravated during walking but most violent when ascending stairs; it disappears during rest (4th L.).

Itching in the palm of the right hand. Pain in the little finger of right hand. Itching in the joint of right hand. Pain in the knee-joint, worse at noon, while walking. Drawing in all the muscles of the lower extremities on the under surface. Sore feeling on the ankle, attended with heat and itching over the whole leg (J. H. H. 6th).

Numb feeling in the elbows, as if the ulnar nerve was compressed, also numbness in the knee-joints (J. M. R. 6th, 1st day).

In the forenoon of 2d day after 1½ trit., head full, nervousness and irritability for a short time, also for a short time sticking pain in the back part of left knee-joint; in the afternoon a slight pain in right knee-joint, similar to the pain in the left one, with a creeping sensation above and below it, seemingly about the bone, lasting about an hour. The above pains in the knee-joints have been felt occasionally every day for four days (H. R.).

Frequent pain in the lower side of left knee, near the inner side of tibia, lameness and frequent stitches on walking, particularly the inner side of knee-joint (C. E. T. 5th, 2d day).

. Awakened in the night by a painful twitching in the lower part of the leg (H.).

Lassitude in the lower part of the legs, more in the afternoon; after 5 days (B).

In 10 hours after 3d. trit. a dull aching pain in the bones of the forearm and legs, and in four days a numbness and heavy aching in the arms, knees and lower legs (A. J. B.).

Dull aching in the bones of the forearms and legs (A. J. B. 6th, 1st day).

In 10 minutes after taking the 3d. trit. in the evening, he felt a warm glow through his legs, which was soon succeeded by a dull pain in the left arm-joint just above the elbow, and by occasional darting pains in the lower extremities (J. P. D.).

Pain in the *tendo achillis* and *os calcis* after walking (J. M. R. 6th).

Pressing sensation in the foot as if it would fall asleep (H.).

(Rheumatic pain in the large toe) (H.).

Cold feet day and night (B.).

Coldness in the joints; shuddering and drawing in the arms and legs (H.).

* Wandering gout (Ktz.).

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Skin :- -

A red itching spot, as large as the end of the thumb, on the right side of the forehead (B.).

Red herpetic spots on the forehead, particularly over the right eyebrow (B.).

Redness of the skin like a chronic eruption (Nd. 1st.).

Two small red spots made their appearance on each side of the *glans penis*, secreting a large quantity of lardaceous matter. It had the appearance, according to his opinion, of herpes preputialis (J. H. H. 6th.).

A pricking itching on the anterior part of the neck, with swollen glands, and in front on the chest; red points make their appearance converging into round spots, full of hard granular pimples; the itching of the eruption increases on scratching it, finally the spots are painful (H.).

Rush of blood to the back part of the head, attended with violent itching and heat extending to each ear, and behind the left ear there came three hard lumps, one of the size of a small shot, the other of a buckshot and the last a size larger (J. H. H. 6th.).

In the evening violent itching on both shoulders, on which red streaks appear after scratching: besides that, small red elevations are to be observed, the itching from which is almost insupportable. After going to bed it disappears (C. Hg. 1st day).

In the morning red papulous eruption, without itching, on both elbows, left one the worst (9th day, C. Hg.).

An eruption on the inner and lower part of the thigh with itching (D. W. 6th, 1st day).

From the first time he took the medicine, he felt as if pimples were to come out over his body, with a general uneasy sensation and itching (the prover had this feeling for some time, but now in an aggravated form (Rt. 30th & 3d).

* On the finger a red eruption, sometimes with pustules filled with yellow matter, the same under the right knee, with occasional itching (Nd. 3d).

* Chronic impetigo (in a man who had gonorrhœa some twenty years ago) pustules and scabs on the upper lip immediately under the nose, right nostril also somewhat tumefied (Nd. 3d).

* Chronic impetigo in another man on the same spot as the above (Nd 3d).

* Does well in scabies ferina (Ktz.).

* Small-pox (Ktz).

* It especially purifies the blood (Ktz.).

* It is useful in gangrenous ulceration. Ebn. Dsschold.

A cut in shaving bleeds very little (C. Hg.).

Itching of the lids of both eyes (J. H. H.).

Shooting pains in the inner canthus of right eye, with a burning and itching (J. L. M.).

Itching on the body and canthi (H. R.).

Itching of eyelids and of various parts of the body (H. R.).

In the eyes for two days excessive itching of the inner canthi (C. E. T.).

From 9 to 12 o'clock, itching on the outer canthi, severe and frequent, with a sense of stiffness in the upper lids (C. E. T.).

Much itching in the left ear, from the 1st to the 4th day, scurfy eruption in the right external ear, between the helix and antihelix (C. Hg.).

Much itching in the right ear (C Hg.).

Itching on the left side of the face (J. H. H.).

Itching of the nose with bleeding after blowing it. The blood is very dark. The itching is caused by pimples in the right nostril (J. H. H.).

Small spot on the left side of the tongue which itches (J. H. H.).

Itching on the palm of right hand. Itching in the joint of right hand (J. H. H.).

Violent itching on the inside of the thighs, knees and legs, worse at the knees, especially at night (A. L.).

An eruption on the inner and lower part of the thigh, with itching (D. W.).

Itching at night, especially on the inside of the thighs (Rt.).

Violent itching and pricking on the inner side of the knee-joint, ever since he commenced to take the medicine, worse in the night and in the morning before getting up (A. L.).

Sore feeling of the ankle, attended with heat and itching over the whole leg (J. H. H.).

Violent itching at the anus, worse at night in bed (J. H. H.).

Violent itching of the corona glandis, with a profuse secretion of pus (gonorrhœa glandis), the itching was so violent as to cause him to rub it, which only eased it for a moment, to return with tenfold violence (J. H. H.).

Itching on various parts of the body, while walking in the open air (H. R.).

Itching over the body at times (H. R.).

Sleep:—

After dinner an unconquerable desire for sleep. (For a long time he has not been in the habit of sleeping after dinner.) (3d L.)

Less desire to sleep after eating (3d day, C. Hg.).

Feeling excessively sleepy at 7 o'clock in the evening, she went to bed and slept well through the whole night (2d day, B.).

Great desire for sleep in the evening, for several days, in the case of several provers (B.).

Increased sleepiness in the evening (3d day, C. Hg.).

Great sleepiness in the evening (13th day, C. Hg.).

At 11 o'clock A.M., pains in the head return again with a disposition to fall asleep, while trying to listen to the lecture, notwithstanding his making a great effort to keep awake (3d A. J. B., 3d day).

Disposition to sleep during the day (J. H. H., 6th.).

A dull, heavy and sometimes a sleepy feeling during the day (A. L., 1st day, 3d.).

Weakness and sleepiness in the eyes about noon; could scarcely keep them open (A. L., 3d, 6th day).

Head full, heavy, with strong pulsations of the temporal arteries; great inclination to sleep during the day (H. R., 1½, 3d day).

A dull, heavy and, at times, a sleepy feeling during the day (A. L., 3d, 1st day).

Weakness and sleepiness in the eyes at noon; he could scarcely keep them open (A. L., 3d 6th day).

Heaviness and sleepiness during the day (H. R., 5th day, 1½ trit.).

At 11 o'clock A. M., unusual drowsiness and heaviness over the eyes (Nd., 1st day, 5th).

Unusual drowsiness in the morning (Nd., 1st day, 3d).

Nightly sleeplessness without pain and fatigue; he feels strong in the morning as if he had no sleep necessary (H.).

Sleeps an hour only; after eight days (B.).

He awakes very early but feels too indolent to rise and falls asleep again (1st week, C. Hg.).

Awakes early (C. Hg.).

Loss of sleep during the forepart of the night. Restless and tossing about during the whole night with anxious dreams, which he is wholly unable to recall after waking (A. J. B., 6th, 2d night).

Nightly sleeplessness; hears the clock strike all night. He awakes up suddenly as from a dream (Nd., 1st).

Before going to bed took the 30th dil. Slept very well but had very vivid dreams, which he could not remember. After taking the same dilution the next night, he felt a drowsy sensation as if he would readily sleep. But on going to bed, at 12 o'clock, the drowsy sensation continued, with very strong desire to sleep; he could not sleep, however, on account of a very disagreeable nervous sensation which caused him to toss about in bed for an hour and a half. He did not sleep so well as the night before; his dreams were vivid and rather pleasing, but he could not bring them to his recollection. After taking the same dilution again the third night, he is again restless and has vivid dreams. On the fourth night he took 5 gr. of 3d trit. He felt no desire for sleep but sat up and read until half past 1 A. M. He did not sleep for half an hour after going to bed. He dreamed continually but not so vivid as before. On waking at 8 o'clock his throat is dry; he is thirsty; sensation as if he had not had a refreshing sleep (Rt.).

After retiring did not sleep for over an hour but tossed about; very nervous and mentally vexed (Rt., 6th.).

Restlessness and sleeplessness at night from a constant flow of ideas changing from one subject to another (J. C. R., 30th) (1st night).

First night after taking 6th dil.; restless, uneasy sleep; second night after, the same dil. Increased restlessness, with constant dreaming; seemed to dream before getting asleep (D. W.).

The 5th night after taking the 1½ trit.; tossing about and sleeplessness for an hour, after being awakened at 4 A. M., by a dull sticking pain in region of left kidney, which lasted but a short time (H. R.).

Sleep restless with vivid dreams, but he cannot remember them in the morning (J. M. R., 6th).

After taking the 6th dil, on going to bed, great restlessness at night; continual dreaming and waking. He would scarcely be lost in a drowse before he would be dreaming. Vivid dreams of studies and business.

The 2d night, after taking again the same dose; he had many dreams and waked up often.

The 3d day; the same dil., in the morning. In the night continued restlessness, and dreams that a lump is in his throat and right ear.

The 5th night; again the same dose. In addition to the restlessness and dreaming he woke up with a throbbing pain in the organ of conscientiousness, extending to forehead over the eye.

The 7th night, without a new dose, he had vivid dreams of the lectures, particularly the anatomical. He could not believe that he was not actually there.

After taking at bed-time the 3d trit., he had several dreams and woke up several times through the night.

The 3d night, without a new dose; restless sleep with many dreams (A. L.).*

Dreams with much talking during the sleep, which is very restless (J. H. H. 6th).

Although accustomed to dream much, yet he had more troublesome dreams than usual. He awoke and started up several times without purpose; once with a heavy pain in the forehead. In one of his dreams he saw a spider as large as an ox (J. P. D., 3d, 1st night).

Dreams of the events of the day (2d day, B.).

Dreams of unimportant events, sometimes to be remembered, sometimes not (3d day, C. Hg.).

Vivid dreams of sensual nature (Nd., 5th).

Frightful dreams the 3d day (B.).

Does not remember his dreams in the morning, but they occur to him long afterwards (3d day, C. Hg.).

Fever:—

Feeling of coldness and sensation of inertia, drowsiness (Nd. 1st).

Chilliness in the warm room (A. J. B.).

Skin moist and cool; pulse 60 (A. J. B. 3d day).

Hands cold (J. M. R. 6th).

Chilliness in the morning, with perspiration under the arms; he cannot get warm, even near a hot stove (3d L.).

Front of the head very hot (A. J. B. 3d, 1st day).

A heat when in bed during the night, that seems to ascend from the stomach into the neck and head, disappearing after rising (H.).

Internal and external heat of the body during the whole night; chilliness in the morning on rising; gripings, thin passage, and continual weariness of the whole body after nine days (B.).

He cannot endure the heat of the sun in his room (1st day, C. Hg.).

Heat as from hot weather, mostly on the right side of the head, and on the breast, and arms, but worse on the left arm (1st day, C. Hg.).

* Some use it as an amulet in inflammatory fevers (Ktz.).

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* It will be perceived from this symptom, as well as several others, that the restlessness and sleeplessness so frequently experienced at night did not depend upon the medicine being taken at night. Cinnabaris evidently produces sleeplessness at night and sleepiness in day time.

Seems to lower the pulse in the forenoon and make it irregular. The pulse, which was at 12 o'clock A. M. from 44 to 52, rose at 4 o'clock P. M. to 80 (J. M. R. 6th).

Pulse at noon 60; in the evening 80 (D. W. 6th, 1st day).

Profuse sweating between the thighs. All the other symptoms are most violent at night in bed, but the sweating is worse at 12 o'clock in the day (J. H. H. 6th).

Though in itself not a sudorific, yet it possesses many virtues (Ktz.).

General Symptoms:—

Sensation of lameness in all the limbs; he is indolent and sleepy (H.).

Pain in all the joints, with lameness during the day D. W. 6th).

Weariness, no disposition to labour (2d day, B.).

Feels very languid; he would go to bed if he had the time (3d L.).

Great excitement to activity, alternating with lassitude; the weariness of the body is better after a short repose (4th day, C. Hg.).

Tired and prostrated, particularly before and after eating; better when riding in the open air, but only for a short time (the first 4 days, C. Hg.).

In the morning a sense of general prostration; great weakness of all the limbs. Feeling of depression, and weakness of the whole system as after a severe illness (A. J. B. 6th, 1st day).

Lassitude, weariness, feeling as if an attack of typhus fever were to come on (J. H H. 6th).

Uncommon tiredness and weakness (A. L. 3d, 5th day).

Feeling of cold and sensation of inertia; drowsiness (Nd. 1st).

Great drowsiness and lassitude in the warm room (C L. M. 6th, 1st day).

Nervousness and irritability about noon, for a short time (H. R. 1½, 2d day).

A peculiar nervous thrill pervading the whole frame, even to the fingers and toes, affecting especially the joints. Sense of languor and depression, as after excessive exhilaration or intoxication. The above sensation continued without intermission for three days (C. E. T. 5th).

Unusual irritability during the whole time since he took the medicine (D. W. 6th).

The next day after taking the 30th, general nervous, uneasy sensation (Rt.).

Characteristics and Conditions:—

Pains all aggravated in the evening.

Feels better in the open air and after dinner (A. J. B.).

All the symptoms except the sweating are most violent at night in bed. The sweating is worse at 12 o'clock in the day (J. H. H.).

The headache is much worse after sleeping (Nd. 1st).

The pains intermit in severity, and those in the hypochondria are relieved by bending forward (H. R.).

The first and second day more symptoms during the day (C. Hg.).

Its action continued nine days (H.).

Many pains resemble the slow and great movement of an irresistible power (C. Hg.).

Cinnabaris has four times as many symptoms in the left arm as in the right, and two symptoms on the left side of the face and tongue, and one on the left breast, but one on the right side of those organs.

It has three symptoms on the right supra-orbital region, one on the right side of the head, nostril, shoulder-joint and thigh, but none on the other side of the same parts of the body.

The symptoms in the other parts of the body seem to be nearly equally balanced between the right and left side.

As it seems to produce sleeplessness at night and sleepiness in the day-time, it will probably become an important remedy for these two conditions, and in two cases, where the former symptom was present, it has been very beneficial.

Therapeutic use :—

With regard to the action of *Cinnabaris* there yet reigns doubt; some consider it as entirely powerless, and others as a virulent and deadly poison. According to Wibmer, there is more ground for the former than the latter opinion. (How does he know? He himself confesses, that farther experiments must clear up the point.) *(Wibmer. Wirkung der Arzneimittel und Gifte).*

Pure Cinnabar is very highly prized on account of its marked effects in the worst diseases (Ktz).

Although *Cinnabaris*, when taken into the stomach, is not digested, nor forms a constituent of our bodies, it does nevertheless as an alterative wonderfully exhilirate the archæum, as long as it remains in the stomach (Ktz. See C. E. T.).

Mercury in combination with sulphur, as in *Cinnabar*, has not the same power, nor does it cause, bound by this fetter, the same evils as without it (Ktz.).

CRATO says, (Ep. 7) that the strongest constitution can hardly endure its effect (Ktz.).

FERNELIUS DE VEN writes, that horrible effects had followed the use of Cinnabar. But in the case mentioned it is doubtful whether the painter suffered from the effects of the natural Cinnabar, or from the orpiment (Ktz.).

It is the most reliable antidote to poison (Ktz.).

It exalts the virtues of other medicines (Ktz.).

FURITIERE says in his book it is a poison.

Native Cinnabar, as an impalpable powder, is almost a universal medicine—10 to 30, 40 gr., or a drachm, for 40—60 days, *taking it always at bed-time* (Lemery).

Cinnabar is seldom used inwardly but for horses (Pomet).

There is a great deal of danger in painting the face with it, and bad consequences may follow (Lemery).

There is a strengthening power attributed to it, and therefore it is given in all desperate cases (Ktz.).

Sometimes the best native cinnabar excites nausea ; vomiting, anxieties, heat, burning, etc. (J. Hill).

Native Cinnabar will not produce salivation, but the artificial will, speedily and easily (Lemery).

Cinnabaris is an excellent anti-venereal, expels the pox and all foulness out of the whole body, with all its consequences; it sweetens the blood, takes away all manner of pains and aches in any part, all manner of swellings, ulcers and nocturnal pains. Kills worms (Lemery).

Specific for falling sickness, excellent for vertigoes, apoplexies, palsies, lethargies and all diseases of the head and brain (Lemery).

Cinnabar is used in epilepsies, vertigoes, madness and all spasmodic affections (J. Hill).

Internally *Cinnabaris* is seldom used, except that it is an ingredient of several *pulveres anti-epilepticos* (Ktz.).

It possesses the power of alleviating pain, particularly in epilepsy (Ktz.).

The celebrated SENNERT used it in the form of powders against epilepsy (Ktz.).

CRATO, (ep. 137) doubts the magnetic power of Cinnabaris against epilepsy (Ktz.).

Cinnabaris does wonders externally, if tied on the pulse (in the case of a person of high rank, lying sick with the small pox, and who had spasms) (Ktz.).

Cinnabaris cured in the case of a somnambulist a fever induced by the effects of sweet marjoram, but produced at the same time the most terrible spasms.

Cinnabaris is beneficial in indolent ulcers (Ebn. Dsschold).

It is beneficial in mortification and malignant pustules.

It arrests hemorrhages.

It is good in all salves and plasters (Garde de Sundheyt Lubeck Steffen Arndes, 1510).

Cases :—

J. C. Pain in the back of the neck shooting to occiput with stiffness and hard swelling of the glands at the back of the neck ; these symptoms were relieved by *Cinnabaris* 12.

B. L., æt 3, of pale complexion, had formerly eruptions on the scalp, which were cured by *sulphur.* She now has a soreness on the scalp on touching, with a pain in the left side of the head, about the organ of conscientiousness. One or two doses of *Cinnab.* 12 permanently removed the above symptoms.

Mrs. D. Pain from back of neck to back of head, behind the ear, shooting to forehead ; cured by *Cinnab.* 30.

Rev. O. Heaviness from one temple to the other to occiput, cured by *Cinnab.* 12.

Ten similar cases, charaterized by pain from occiput to forehead, only varying in some slight symptoms, were cured by *Cinnabaris* 12 and 30. The majority of these cases were cured by *Cinnab.* alone ; a few required other remedies for their final removal.

Four other persons also received the remedy for similar symptoms, but they did not return, in order to report their cure.

The observation of "SCHROEDER" in his "*Arzneyschatz,*" that *Cinnabaris* is a great "*Specificum cephalicum*" is no doubt correct.

EDITOR'S NOTES.

ERGOT OF RYE IN INERTIA OF THE BLADDER.

Dr. Galicier, as we learn from *Les Mondes* (Jan. 15), has tried the ergot successfully in paralysis of the bladder. "In the hope," says Dr. Galicier, "of enabling the bladder to contract I ordered 2 grammes of powdered ergot every day, to be taken in two packets of one gramme each, at the interval of an hour. Towards the 8th day the patient felt an inclination, without the power, to urinate. On the 11th day he passed urine unaided. After 12 days the treatment was discontinued. The patient had taken altogether 24 grammes of ergot, without experiencing any of its physiological effects. He continues to urinate freely, but with a certain slowness in the beginning, and with a little effort, as he has been doing for some years.

THE SELECTION OF THE WET-NURSE.

A mere examination of the milk is not enough to decide upon the selection of a good wet-nurse, as the following case, reported in *Les Mondes* (Jan. 1), clearly shows :—

An infant of some months, fat, strong, in good health, and of very good constitution, had a nurse, chosen with attention, furnishing an abundant milk, rich in globules. The mother remarked that each time the infant sucked the nurse's breasts, it became restless, weakened, irritable, refusing to sleep, and becoming red. The fact was communicated to the physician, who examined *de nouveau* the milk of the nurse, which was found to be as rich and abundant as before. The habit of drinking was suspected in the nurse, and the suspicion being confirmed, the quantity of wine was reduced, and all was right.

In this country there is a habit in nurses and even in mothers, equally if not more pernicious, we mean the habit of using tobacco, charred or pure, alone or with betel. Many an infant, we know from positive facts, falls victim to this nasty, disgusting, and withal most mischievous habit. Indigestion, nervousness, inexplicable cachexia, epilepsies, hysteria, and a host of other diseases are the result of this habit in the nurse and the mother.

PROGRESS OF IDEA IN FAVOR OF CREMATION IN EUROPE.

Sir Henry Thompson has discussed the subject in a recent number of the *Contemporary Review*. The advantages he sums up in three words—economy, cleanliness, and wholesomeness. That the practice would be wholesome there cannot be the slightest doubt. When buried the dead body must undergo a series of decompositions, the products of which are deleterious and contaminate the soil, the water and the atmosphere, before it is reduced to the ultimate elements—a reduction at once and rapidly brought about by cremation. Again, we have only to think of it to be convinced that this method of disposal of the dead is as clean as it is possible to imagine. With reference to its economy we are glad to see that even the *Lancet*, which some time ago objected to it on the supposed ground of its expensiveness, now urges its adoption on the ground of inexpensiveness "for a body," according to it, "may be burnt at a cost little exceeding half a crown in fuel." Another advantage which will follow the practice of cremation would, according to the *Lancet*, be "the gradual extinction of those parasites of our modern civilization—the undertakers—whose existence depends upon the weakness of our characters when assailed by the impulsive strength of our affections in times of affliction."

ON SOME POINTS IN THE PHYSIOLOGY OF THE BRAIN.

Under the above title Dr. Eugene Dupuy has published, as we learn from the *Lancet* (Jan. 24), an interesting thesis in which he gives the results of some recent experiments supporting the suggestion of Brown-Sèquard that the cerebral hemispheres contain reflex and inhibitory, and not motor or sensory centres. In Dr. Dupuy's experiments electric irritation of convolutions gave rise to localized muscular movements, thus agreeing with Ferrier's experiments; but in the former movements almost the same were obtaind at whatever the point in the anterior or middle regions of the brain the electrodes were applied. This led Dupuy to suspect that the electrical stimulation was not limited to the points to which the electrodes were applied, and he appears to have fully confirmed this suspicion by the following experiments:—

"He laid bare one half of the brain of a dog, under complete anœsthesia, and applied to the posterior extremity of the hemisphere the nerve of galvanoscopic frog, the legs of which were insulated on a plate of glass. The electrodes were then placed on the front of the hemisphere, and movements produced in the opposite fore-paw. Simultaneously the legs of the frog were thrown into violent contraction."—"Upon another dog, under partial anæsthesia he divided with a fine curved scalpel the corpus striatum and optic thalamus on one side, the corpus callosum having previously been cut through. The electrodes were then placed on the convolutions above and behind the Sylvian fissure; contraction resulted, when the current was strong, not only in the foreleg of the opposite side, but also in the hind-leg."—"In another experiment he removed the whole cerebral masses above the pons Varolii, and applied the electrodes to the surface of the section. Muscular contractions resulted, limited to the fore-limbs, right and left. From the smallness of the surface it was not possible to say whether these movements were on the side opposite to that stimulated or on the same side."

The question now is, how to account for the discrepancies between the two observers? Were the electrodes employed by Dr. Dupuy thicker than those of Dr. Ferrier? and were they applied with less care? This is what we suspect. Nevertheless, the experiments of Dupuy have this important bearing on the whole subject. They prove beyond a doubt that the movements produced are explicable on the hypothesis of conducted electricity to the basal ganglia of the brain, which are thus the direct originators of movement. In other words, the cortical ganglia would thus appear to produce movements, not directly, but through the basal ganglia. The theory, therefore, which originated with Gall, that the cortical ganglia are seats of the faculties of the mind, is not shaken, as it was supposed, it has been, by the experiments of Ferrier, as will be seen to have been well explained in the article on the "physiology of the brain," reprinted under our *Gleanings* from the *Quarterly Journal of Science* for January.

THE BURDWAN FEVER.

(Continued from p. 437, Vol. vi.)

(*f*). Under the heading of drainage, great stress has been laid on the obstruction which has been offered to the khals artificially or naturally by embankments thrown across them or by the natural deltaic influence interfering very much with the capacity and patency of a stream. Artificial obstruction is mainly caused by bund raised across the khal to retain water in its bed for agricultural and domestic purposes, or by the construction of a high earthen embankment round a village to prevent any damage from the inundation-water getting into it. I have personally investigated the instances of the former kind of obstruction met with in the Jehanabad subdivision which were pointedly marked out by the writer of 'The Epidemic fever in Bengal' as having been the immediate cause of the outbreak of fever. As the pamphlet carried with it an appearance of authority and conviction, and created a sensation among those interested in the subject, we give them in the author's own words:—'The subdivisional town of Jehanabad is situated on the eastern bank of the Dwarkessur river. Its drainage, following the laws we have already explained, flowed into the paddy fields lying to the North-east of the town whence a part of it used to fall into the Kana Nudee. But the major portion, after passing over the paddy fields, collected in the Byra Julla and thence discharged into the Kana Nudee through Gurbari khal. This khal, pursuing a serpentine course, traverses a large tract of country and, receiving the drainage of a large number of other villages besides that of Jehanabad, opens into the Kana Nudee at a place called Gapinathpore. Its mouth was closed by the Zemindar through whose property it passed in the Bengali year 1273 (A. D. 1866 and 1867) for the purpose of retaining water on the rice-fields which are very high and from which the monsoon water ran off into the khal. This closure helped to keep the khal full, and at the same time rendered it incapable of receiving the drainage from the paddy fields, and the latter in their turn failed to draw water from the villages of which they were the drainage media. This lock-up was followed by the outbreak of an epidemic almost simultaneously in all the villages of which the khal was the drainage outlet;—in a mitigated form in the year immediately succeeding the one in which the khal was closed and virulently the year after' (Pp. 15, 16).

Again : 'In the same tract of country and for precisely the same purpose, another stream, called the Koko Nudee, which was the drainage channel of a large number of villages and which likewise emptied itself into the Kana Nudee, was similarly closed at its mouth at Dhurrumpota in the same year, viz., 1866-67, and the same was followed shortly after by an outbreak of epidemic fever in a number of villages, &c. We should here mention that the cross dam over this khal is provided with an apology for a sluice which is so adjusted as to let out the water only when the khal is full to overflowing and when the crop of the adjoining fields is likely to suffer from excess of moisture. This of course does not help the drainage of the villages in as much as the whole of this tract is very high and the villages situated therein are not much higher than the surrounding paddy fields. The consequence is that the khals and the paddy fields being full do not draw the drainage from the adjoining villages.'

The authenticity and correctness of these remarks have been shaken by the following result of a personal investigation recorded on the 13th May 1873. 'I paid a visit this afternoon to the bund at Paharpore (close to Gopinathpore.) It is 30 feet broad at its base and about 15 feet in altitude and extends right across the Gurbari khal very close to the point where it discharges its water into the Kana Nudee. The villagers, invited to give information on the point, told me that the bund had been in existence about 20 years ago and remained in working order for 8 years, shutting in the water completely. In the event of an inundation they used to have a side-cutting to let out the excess of water. This always retained water in the khal and kept it full even in summer. After 8 years' satisfactory working a portion of it was washed away by heavy rain. The gap remained open for four years producing much scarcity of crop in absence of water until in 1866-67 it was reconstructed by the zemindar Baboo Joy Kissen Mookerjee. Sufficient earth was thrown over the remnant out of the original bund so as to raise it 2 feet higher than the former level; but the next year's flood washed away the northern extremity of the embankment, causing a breach about 18 feet wide, spacious enough for a full current to pass with freedom. The people suffered much for want of good water both for drinking and agricultural purposes, there being no drinkable tank in the village! So virtually no obstruction existed for five years previous to the outbreak of the epidemic, and at the time the fever did make its appearance the obstruction was no longer in operation and the khal was patent throughout and remained so up to June 1873, when at the urgent request of the inhabitants the bund was reconstructed with a side channel higher up for the drainage of surplusage of water. I am happy to state that the reconstruction of it last year before the rains has not materially affected the health of the district which, if at all, has shown signs of improvement of late. In reference to the para on the Koko Nudee, I submit the following fact:—'The 13th May 1873. Visited the Koko Nudee and the bund. The khal or stream has its source at Sonagachee and ends at Dhurmopota by joining with the Kana Nudee. The present bund was constructed about 8 years ago and the fever has broken out 3 years only ago. It was in perfect operation for 7 years but gave way only last year through pressure of water. The engineering mechanism displayed in its construction was such as to preclude any idea of obstruction, for whilst it retained a certain quantity of water, it always let out by a side opening above a certain level, the excess of drainage water. The out-flow was constant and efficient enough in as much as the water in the khal never over-flowed its banks as long as the bund was in perfect action, whilst it retained water enough for agricultural purposes. Now before the construction of the present cross dam, about 13 years ago, there was a pucca wall with a sluice to let out excess of water. At times the pressure of the water behind was so great as to make it impossible for the valve to be raised when the water would flow over it and find its exit. In 3 years the whole work came to pieces, when the present mechanism was substituted. But antecedent to this again, from a time beyond recollection, the people were in the habit of bunding up the mouth by earthern mounds which were as often washed away on account of the dead opposition they offered. Thus we find three systems of embankments resorted to at different times. The 1st or old system in which a dead barrier was offered and as often washed away. The 2nd improvement consisted of a pucca wall with a sluice to let out occasionally the excess of water. And the 3rd or the last one, which had the advantage of a continuous outflow. Now, which of the three offered the most impediment to drainage we need not take time to consider, and yet it was during the operation of the last method (i. e. only 3 years ago) when the flowwas so constant and the obstruction so little that the banks never overflowed, that the fever first broke out.'

The bunding up of the Kana Nudee at its mouth had a different motive however. Its object was not to retain water in the khal but to prevent its entering and inundating the tract in its vicinity. It allowed the beds of the khals to carry on the drainage uninterruptedly as before, but in the absence of the deepening effect of a running stream the bed of the Kana Nudee became partially filled up. One mouth of the Nudee is open,—that which joins the Saraswati khal and towards which the drainage level inclines. The closure being at its other mouth, it can be presumed that the embankment has not so much injured the locality by depriving it of its draining agency as, by keeping the channel dry in that season of the year when there is no water to be carried away, it has damaged the health of the district by depriving it of a source of its good water supply. Every where in its course the out-cry of the villagers is bad water and scarcity of water, but I found very few attribute the fever to the obstruction and insufficient exit of the drainage.

In rainy weather I found the bed of the Kana Nudee containing water to the depth of 5 or 6 feet which had drained into it from the adjacent villages. Since the above was written, the Government has been awakened to the necessity of opening out the channel and turning into it the water of the Damoodah. More than 20 years ago the bed of the Kana Nudee formed the original course of the river, but it was closed up opposite Selimabad to prevent the overflowing of its banks and causing damage to rail-roads that passed through its area. Its bed silted up next year but the force of the current opened out for itself a fresh channel. The small stream that communicated with the Damoodah at this portion expanded into a wide river that flowed south-east through Amtah to discharge itself into the Hughli close to the point where the Roopanarain empties itself also.

Thus the course of the main channel was turned. Whilst one district was deprived of the agency of a running stream another had the advantage and disadvantage of the same. If the closing of one channel be supposed to give rise to local unhealthiness, the substitution of another with similar conditions in another part of the country ought to be attended with corresponding improvement. But when after 20 years we fail to observe any such beneficial change, we are forced to the conclusion that the unhealthiness of the district forming both the present and past bed of the Damoodah is independent of deficient drainage. However, now that the Kana Nudee has been opened out anew the fact will be proved to demonstration by observing the health of the district next year through which it will flow.

The other cross-dams and weirs are raised for the purpose of fishery or to irrigate the fields in the dry season, but they are never undertaken before September when the water from the village has all drained off, and what remains in the khal is nothing compared to what had been discharged. To attempt to close a stream in the height of the rains with earthen mound whose power of cohesion amongst its particles is so feeble that the slightest moisture melts it to atoms is under-estimating the hydraulic force of a body of water. For as yet I have not seen any earthen dam strong enough to oppose the action of a sheet of running-water for any length of time without giving way to the pressure behind. In most of the Kutcha roads recently constructed I have seen water-courses so obstructed, in some instances with an apology for a culvert or none at all, but these roads give way to the continual pressure of water, wide breaches are thus made which have to be crossed over in the rainy season by means of canoes and rafts. Thus the new road which passes from Jehanabad to Bally have five such breaches in the course of two miles. No doubt they did offer some impediment to drainage at the commencement, but if the outbreak of fever be attributed solely to their construction, now that the obstruction has given way, the fever ought to disappear along with the removal of the cause. But its persistence clearly indicates some cause more potent and more constant in nature.

New roads in the subdivision of Jehanabad, to which district alone my observations are chiefly confined, have not sprung up of late, excepting two or three kutcha roads running for short distances. As I have just remarked, the obstruction offered by them is not so wide-spread as to account for fever all over the country. Besides, the first appearance of the disease was at Kumargunge, a village situated on the southern bank of the Dwarkessur and entirely beyond the influence of the roads that are on its northern side.

As for the agency of rail-roads in the production of the disease, one fact negatives the belief, namely, that the epidemic devastated "Oola" and other places prior to their construction, and that the places that suffered most are far beyond their influence. Thus Jehanabad is about 28 miles from the nearest railway station, and yet it, with all its adjoining villages, suffered most in the late visitation. The unanimous opinions of the Engineers commissioned to report on the matter prove, 'that there was no ponding up of water on the up as compared with the down stream side of embankments, that there is ample water-way through existing culverts; that as a rule, there is no difference in rice crops on the two sides and lastly that there is no fixed relation between the unhealthiness of villages and their proximity to roads or railway embankments, that, consequently, such works cannot fairly be considered as sources of obstruction to drainage or the causes of local unhealthiness.' However, Dr. Smith takes exception to the succeeding remarks and says—'that although no ponding up of water may be conspicuous, an amount of subsoil stagnation may occur sufficient to be locally prejudicial to health; such an effect might be produced whilst there was but a very slight difference in the levels of surface-water on the opposite sides of an embankment.' The universal nature of the outbreak in Lower Bengal precludes the idea of its generation in local obstructions to drainage, which can only account for the outbreak in villages under their immediate influence, and certainly not in others, which own altogether different systems of khals and rivers. Nor has the fact been established that all the villages without exception have had their drainage obstructed likewise. This leads us to the discussion of the next heading of causation, *viz*:—

(*g*). Alteration in the course of rivers and silting up of their mouths. On referring to the bed of the river Hughly it will be found, that for the last century it has deviated from its original course. Thus villages have been absorbed in its watery bed and new ones have sprung up where heavy laden boats once sailed with impunity. The village of Kanchrapara, which was very severely visited by fever, has its old site in the bed of the river. I am myself a native of the place, and I was told by my parents, that about half a centuary ago our family dwelling house that now stands on the very bank of the river, was the easternmost boundary of the village. Similar reports will be told of Guptipara, Santipur where at present extensive sand banks have been left indicative of the encroachment of the water and its subsequent subsidence. Analogous history also will be told of the Bhagirati, the Damudah and the Dwarkessur. In fact the encroachment on one bank and the retiring from the other form the characteristic feature of the rivers in India. This change is more perceptible at the mouth of the river than at its origin; hence the places on the former are more liable to change in their physical condition than the latter. Any obstruction at its mouth will necessarily cause the rising of subsoil water-level in the immediate neighbourhood, which by capillary attraction will pass also to the villages adjacent. Thus year after year more places will come under the influence of dampness and get in their turn desolated by fever. This view of the question gets some countenance from the fact of the slow spread of the Epidemic from one place to another, and to the places, bordering the river side, having been previously and more severely affected than those situated farther inland. But the manner of its subsequent subsidence does not lend any further support to this hypothesis. For whilst the country primarily affected begins to improve, new ones continue to be desolated and this improvement cannot be coexistent when both own a general drainage medium. Besides, the filling up of the mouths of rivers is an hypothesis not supported by actual experiment,—an hypothesis which is opposed to the fact that in the height of the flood of the Damudah rising from 15 to 20 feet in the course of a night the whole of that immense bulk of water is drained away in the course of 24 or 48 hours.

Whenever the waters recede and leave an extensive sandy tract, any khal that might have discharged its water at that point is partially or entirely obstructed at its point of outlet. Thus the

Bagare khal through which the drainage of Kancharapara finds its exit into the river has the sandbank, just opposite to it, and how far this hinderance or the railways, which have been accredited with the result, are to be blamed for the local unhealthiness is not an easy matter to solve.

But as I have explained that whilst the river recedes from one bank it encroaches upon the land on the other, it may be presumed that the same obstruction does not exist on the opposite side, and yet when both of them are equally affected as Tribeni and Kanchrapara, it makes the subject somewhat mysterious. In the subdivision of Jehanabad, Kumargunge was first affected and it was for some time that this bank had been giving way, yet there was scarcely any difference in the amount of fever between this and Akloky situated on the other side.

It is a recorded fact that some of the rivers have silted up. The Kana Nudee of Jehanabad was once as big a stream as the Dwarkessar which here divided into two branches, one passing through Chandur, Myapur and Khanakul was continuous with the Rupnarain at Bukshee, and the other passed through Balee and became a tributary to the Rupnarain some miles below Ghatal. The heavy flooding that took place some 50 years ago, threw up so much sand that its bed was filled up completely and was raised much higher than the original level. The course of the stream was altered and the bed was planted with mango-trees and cultivated for rice crops. The portion beyond the division now carries simply the drainage of the district to the Rupnarain and remains dry in the summer season. Dr. Dutt mentions the extinction of a channel called the Baluka whose course he has traced for a distance of 10 or 15 miles from Burdwan. At Myapur the Ratnagar khal has dried up for upwards of a century, which once kept up the communication between the Dwarkessur and the Moondeshary. Investigation on this point would bring to light a host of other minor channels that have dried up from a period varying from 20 to 100 years. Such a length of time has transpired since then and the outbreak of fever that one hesitates to assign more share to it than that its influence, if any, must be a slow one and not powerfully active. For directly after the closure of one channel the pent up water makes for it a second outlet and the difficulty is removed. Besides, in absence of any other reliable information if we are to trust to the experience of the ignorant villagers it should be mentioned that their belief is that the water flows in equally strong current and volume as it used to do of old, and that the existing rivers and khals are emptied after inundation as efficiently and quickly as they used to be some years back.

Thus whilst denying to each and all of the foregoing causes the credit of bringing about the present outbreak of fever in an Epidemic form, I admit that they are active enough to engraft it as endemic on the soil. They have been in operation for ages past and the fever has co-existed with them. All investigations to establish some special change in them to account for the extra virulence of the poison have proved disappointing. Some of them no doubt have been acting lately in an aggravated form but they also fail to supply a general explanation. Thus with the advance of years general insanitation has been neglected and more filth accumulated in the villages. The general causes of dampness have slowly and gradually increased and the increasing rice cultivation in Lower Bengal has added still more to exaggerate the evil. Yet something more is wanting to explain the explosive way in which the disease showed itself. This will lead us to the consideration of those causes which we have termed as immediate or exciting.

First. Poverty, over-crowding and deficient vital energy. The Government of India, I believe, have partly subscribed to this view, originally promulgated by Col. Haig and supported by Dr. Saunders. It implies that endemic disease has become general not from any increased potency of 'malaria' but from diminished power of resistance in the constitution of the people, brought on by over-crowding, insufficient food and general poverty. To support the existence of this condition in society they had recourse to the doctrine of Malthus. For the benefit of general readers I will quote it as it has been briefly given in Mr. Mill's Political Economy.

'The power of multiplication inherent in all organic life may be regarded as infinite. There is no one species of vegetable or animal which, if the earth were entirely abandoned to it and to the things on which it feeds, would not, in a small number of years, overspread every region of the globe of which the climate was compatible with its existence. The degree of possible rapidity is different in different orders of beings, but in all, it is sufficient for the earth to be very speedily filled up. There are many species of vegetables of which a single plant will produce in one year the germs of a thousand. If only two comes to maturity, in 14 years the two will have multiplied to 16,000 and more. It is but a moderate case of fecundity in animals to be capable of quadrupling their numbers in a single year. If they do as much in half a century, 10,000 will have swelled within two centuries to upwards of two millions and a half. The capacity of increase is necessarily in a geometrical progression, the numerical ratio alone is different. To this property of organized beings the human species forms no exception. Its power of increase is indefinite and the actual multiplication would be extraordinarily rapid if the power were exercised to the utmost. The capacity of multiplication in the human species exceeds even this where the climate is good and early marriages usual. It is a very low estimate of the capacity of increase if we only assume that in a good sanitary condition of the people, each generation may be double the number of the generation which preceded it.'—' Now as to the causes which keep the actual increase of mankind within limit. What prevents the population of hares and rabbits from overstocking the earth ? No want of fecundity but causes very different ; many enemies and insufficient subsistence ; not enough to eat and liability to being eaten. In the human race which is not generally subject to the latter inconvenience, the equivalents for it are war and disease. If the multiplication of mankind proceeded only like that of the other animals, from a manner with theirs, the births would be as numerous as the physical constitution of the species admitted of, the population would be kept down by deaths. In a very backward state of society like that of many parts of Asia at present, population is kept down by actual starvation. The stravation does not take place in ordinary years but in seasons of scarcity, which in those states of society, are much more frequent and more extreme than Europe is accustomed to. In these seasons actual want, or the maladies consequent on it, carry off numbers of population which, in a succession of favourable years, again expands to be again cruelly decimated.'

Basing their theory on this fact of political economy they have been led to look upon this fever as a natural sequence brought on by overcrowding and ill nourishment. That just before the epidemic cruelly ravaged the district of Hooghly and Burdwan, the population had increased to a considerable extent, having been kept up by early marriage which is a necesaary institution of Hindu Society both among the high and low classes and the animal instinct of propagation with which the Hindus look upon the multiplication of species, is a fact which cannot be gainsaid, especially when we take into account the previous salubrity of climate for a great portion of the year for which these districts were famous. Every villager will testify to the crowded population which 'graced' every village before the wholesale illness was threatened. The evil effects of overcrowding show themselves only in families where the sanitary principle is violated, and it is not likely that every family should have been overstocked at the same time. Besides, the well-to-do classes and the European community were free from such culpable neglect. The lower classes spend most part of their time in out-door employments, and phthisis, which is most common under such conditions, is a rare disease in Bengal. Hence, whatever might be said in its favor as being a predisposing cause, certainly over-population cannot be assumed to have had any more share in its immediate causation and spread. The second part of the doctrine points to gradual introduction of poverty in society on account of increased multiplication of the race without any corresponding increase in its productive resources. It is very true that before the appearance of the Epidemic there was a semblance of prosperity all over the country. But the prosperity was limited to the upper few, and was not the lot of the peasant community which form the bulk of village population. The custom of leasing out lands for cultivation with no limited rate of rent, and the exorbitant demand of half its produce by the Zemindars, often leaves a small margin for the benefit of the cultivator who has to cope at the same time with the disadvantage of general increase in the price of all domestic necessaries. Besides, the superceding of some native manufactures, such as cloths, &c. by foreign supply has greatly pauperized the resources of the working classes. It is pitiable to observe the condition to which competition has brought down the weavers that people mostly the district of Jehanabad, and it is to be regretted that no sort of protection has been afforded to that honest body of workmen by the Government by putting a stop to unfair competition in the market. These are the classes of people on whom the brunt of the disease has fallen most severely. The introduction of manufacture in the Jails is another instance of how the income of the working classes has been encroached upon. The facility of transport, now existing all over the country by the establishment of rail-roads, has raised the price of necessaries with the increasing demand. The combination of all these circumstances more than counterbalances the trifling gain which the peasant class enjoyed from the produce of their labour on account of the increased demand and exportation of rice for foreign supply. The daily nourishment of the poor people has continued the same, consisting of rice, salt and vegetables. Fish and milk, of which they occasionally partook, have become a rare luxury on account of their increased price, and the wear and tear, to which they were now liable more than before on account of greater labour called for to produce a larger quantity of rice both for home and foreign consumption, must have induced a failing stamina of health. A weak fortress gives way at the first assault, and a weak constitution succumbs under the presence of a poison against which a stronger one maintains its ground for some time with success.

But taking for granted the actual poverty of the people, can it be said that pauperism knows no distinction with reference to any portion of society at large? Do the Zemindars feed less than before and do the civil European Officers with their princely incomes come under the same category? Yet scarcely one instance can be cited of persons living in and breathing the the tainted atmosphere who have been completely free from its influence. All my inquiries on the subject have enabled me to establish one point that the working classes have suffered most and amongst them the greatest mortality has taken place. Out of them again those remain still serviceable for work who command better incomes. I am afraid to give my countenance to a belief which is likely to prove injurious to society, but I must confess that the general opinion is, that those, that have recourse to some sort of narcotics as wine, tobacco, or gunjah, have fared better than those who do not. Poverty does not bring about the disease primarily, for the villages in Bengal are at par with reference to the condition of their inhabitants, and yet why should the Burdwan district receive the preference to others claiming similar disadvantages. But when once the disease is introduced into the system, poverty plays a very important part in retarding convalescence, bringing on repeated relapse after fatigues and exertion, and hurrying on those sequelæ, from the complications of which the patient finds himself impossible to extricate. Thus the greatest mortality has been amongst the poor working classes, whilst the rich have escaped with very little suffering, but no party have enjoyed absolute immunity.

The second theory advanced to explain the immediate spread of the Epidemic, is the superaddition of the element of contagion in the original disease that helps it to spread from village to village through the agency of human intercourse. The facts on which this view is grounded can be briefly summorized. First, that the fever has spread along the railway line. Second, in places beyond the railway the villages more severely 'affected lie on the line of the Grand Trunk Road.' Third, the simultaneous appearance of disease amongst the members of the same family. And Fourth, the spread of disease from one village to that adjacent.

Some facts bearing on the question and brought to light by some Inspecting Staff a year subsequent to the actual disease, gave the theory a shade of importance. He found out in his inquiry that one village in the district of Burdwan succumbed to disease after a few patients from the epidemic stricken locality had taken their refuge in it with actual fever in their person.

Those, who have any thing to do with any local inquiry, will attest to the difficulty, nay sometimes the impossibility, of getting at truth from the ignorant villagers when dates are concerned, and especially when they extend beyond a year. In several local researches I made about the out-break of Cholera, I found out that unless the history was traced within a few days of its occurence it was past record and observation. The first appearance of Cholera always makes a greater noise and creates a greater sensation than Fever which, on account of its very commonness, will pass unobserved and unnoticed.. When therefore with regard to

Cholera the difficulty to trace its first appearance is so great, *a fortiori* it amounts to impracticability with regard to other less attractive diseases, especially when the investigation is made a *year* subsequent to their occurrence. The facts brought forward by contagionists are either not wholly true or may be accounted for in a different way altogether. First, the Fever has *not* taken the course of the Railway line but has spread from Mugra north, south, and west without observing any definite route. Second, the mortality has been heaviest in large towns and populous villages, which generally stand on the Grand Trunk Road. Third, the simultaneous appearance of the disease amongst members of the same family previously enjoying freedom from it, is owing to general perversion of the air. Thus, amongst my own household I was first attacked in July. After one week, my eldest girl, who used to sleep in an adjoining room, was next affected, then my wife, and subsequently the servants. In a fortnight every person went through his turn of illness. But it is to be remembered that the appearance of the disease is sudden. The very week, in which myself and my family were the sufferers, brought on universal disaster over the length and breadth of the district. The communicability of a disease cannot be satisfactorily traced when the Epidemic is at its height and when the prevalence of the disease is universal. But during its decline it is not uncommon to meet with sporadic cases of the worst type in individuals who have never imparted the disease to their immediate attendants. I can cite at least one hundred instances under my personal observation, and I seldom observed more than one case of fever amongst the members of the same house from April to July. After July the fever becomes generally wide-spread, and any conclusion arrived at during its height, must be accepted with caution and reserve. The contagious nature of the fever being thus discarded, its fanciful resemblance to typhus or relapsing fever, will at once come to the ground. The difference will be more manifest when we come to treat of the symptoms and progress.

The theory, which in my opinion satisfactorily accounts for this explosive outburst of disease, is the one by which all visitations of epidemic diseases are generally explained, viz., the assumption of the existence of some climatic change which feeds, as it were, the active principle of the disease and favours its multiplication. The causes I have before enumerated are each and all sufficient to stamp the country with an endemic malarious fever. No one will deny the fact that the three months after the subsidence of the rains throughout India, especially in Bengal, has received the unenviable notoriety of being called *the fever-months.* This fever, though not so general and widespread as the present one, is of sufficient virulence to count numbers of victims. Following the close of the rainy season and fixing for its particular habitat, the alluvial soil of Bengal, rich with organic vegetable matter, medical science has naturally associated both in the relation of cause and effect. Whatever the term malaria may signify we understand by it that invisible agent which is generated from moisture and vegetable decomposition. Nor does the idea seem to be based on mere hypothetical grounds in as much as their combination and sequences are so constant that given the two factors, the non-production of the disease will form a medical curiosity. In Burdwan this fever has borne such constant relation, in its period of appearance and intensity, to the time of setting in of the rains and the quantity of rainfall that one would not go far beyond the mark if he were to prognosticate on these data the severity of fever with which the country might be visited. Thus whilst in the preceding years fever commenced early in consequence of the early setting in of the rainy season, this year (1873) the rains having been late in appearance, the appearance of the disease has been correspondingly late. In fact it was not till August that it showed itself in the district.

It is in the intensity and gravity of their results that the epidemic disease differs from the endemic. But the former presents some peculiarities which can hardly be explained by the simple endemic theory. Its main feature is, as we have shown already, that it is travelling, slowly indeed, but, as some have remarked, yet travelling. Excluding from our consideration the outbreak in Jessore in 1824, we have found it in our own time to have travelled in 13 years from Nuddea to Hughly, from Hughly to Burdwan, and from Burdwan to Midnapore and Bancoorah in an uninterrupted course. Unlike the sweeping but uncertain marches of cholera and small-pox, its progress has been slow and sure, unmarked by fluctuations indemnifying from its ravages particular tracts of country, but all the contiguous villages within the range of its fell influence, have been one after another absorbed in the general vortex of disaster. The first year of invasion is characterised by an increase of ordinary fever cases but it subsides completely with the advancement of the season; the second year counts more victims and the duration of disease becomes longer. With the prolonged suffering the complications begin to appear. A little respite is enjoyed in summer by those who are free of complications but only to suffer again in the ensuing rains. In the third year more mortality takes place from primary attacks and secondary complications, as it finds the system so reduced from constant suffering that it is ill fitted to sustain an assault. Enlargement of spleen and liver, anasarca, anæmia, ascites, cancrum oris now become common sights. In summer, instead of improving, the suffering continues. In the fourth year a slight abatement of its severity is observed, but fatal cases occur amongst chronic patients who succumb under the slight causes of exhaustion. In the fifth year, improvement is more manifest and the temporary abeyance in summer again shows itself. In the sixth year, the majority recover, gaining in flesh and strength, but a permanently enlarged spleen is left behind to indicate the trial through which the locality has recently passed. The insidious way, in which one village after another is attacked, decimated, and restored to its former condition without any apparent change in the habits of the people or the aspect of the country, points to something more than fixed local causes. During the prevalence of fever, the people become more and more pauperised, sanitary conditions are neglected and the villages wear a deserted appearance. Under such unfavourable conditions an endemic disease is more likely to be intensified than mitigated with the advance of years. We have observed that difference of soil, difference of drainage, and difference of water-supply furnish no explanation of its present intensity. The drainage of the town of Burdwan, I have examined to be as perfect as it can be wished, only there is one Railway feeder that intercepts to some extent the water-course of the neighbourhood. And yet as regards sufferings and mortality it has become the worst locality in the district. Places on high laterite soil in Beerbhoom have not been exempt, whilst villages that are regularly swamped by inundation of the Damudah have suffered to a very small extent.

The following general facts may be mentioned as the result of my investigation in the villages under my own immediate jurisdiction.

1st. The large populous villages have suffered most.

2nd. Those bordering the river side are worse off than those further inland and more elevated.

3rd. Places with better sanitary arrangements recover before others.

I have not seen perfect restoration to health in any village in the Jehanabad circle, but the standard of health varies according to difference in the sanitatary condition.

I have stated my belief that the disease, rendered endemic from the various ordinary and extraordinary causes in operation, has now taken an *Epidemic* character by a peculiar climatic influence. I will now proceed to explain its modus operandi consistent with the facts previously noticed. The climatic agency, the presence of which in the air converts endemic diseases into epidemic, we will for the sake of convenience call *the ferment.* Small-pox or cholera is known to pr ve more virulent and more liable to spread one year than another. This excessive mortality cannot be accounted for in any other way than by the supposition of the existence of some toxic agent in the air which feeds, as it were, the active principle of disease and makes it more potent. The active principle of every disease requires a soil or nidus for its growth, without which it will wither or die out. Small-pox, introduced into a deserted island, will cease to spread. It requires the soil of the human organism for its growth and development. In the same way it will die out in a society if there is no susceptible individual to receive it in his system, as it has been stamped out of countries where by the law of the state every individual is protected by vaccination. Given this favourable soil, cases of small-pox will be generated *ad infinitum.* Dengue, when once let loose amongst a community where it was previously unknown, manifested its influence in a wide-spread epidemic, which disappeared as the susceptibility of the individuals wore out and the soil was exhausted.

Malaria differs from these animal poisons in the mode of its generation and multiplication, being independent of human agency. It owns the earth for its habitat. A deserted place, or a jungle, is as deadly as, sometimes more than, an inhabited locality. It may multiply itself *ad infinitum* in the soil till it is so much intensified as to taint the very air. There are records of armies having got disabled by simply marching through malarious swamps. Thus we have two classes of poisons to deal with, one owning a human soil for its generation and multiplication, the other the earth. The activity of the earth-soil is far inferior to the activity and changes going on in the human system. The greater the activity the more rapid is the reproduction of the poison, and the more rapid the reproduction the more rapid is its spread beyond the affected area. Hence the multiplication of malaria being slow, the extension of it is correspondingly slow. Unlike the rapid strides of cholera and small-pox, the influence of malaria is confined within the village where it is generated, and when it does spread, it is limited to places in its immediate vicinity. In a favourable season, the poison of cholera and small-pox will take root, breed, and multiply when wafted across from one place to another if it can find materials to feed upon. But malaria under similar circumstances will just be able to communicate itself to the place adjoining it.

I have observed that every poison requires a favourable soil to be endemic in a country, and it is the addition of a *ferment* in the air that gives it an increased potency and thus converts it into an epidemic agency. The action of this agent in malaria is akin to that of yeast in a saccharine solution, a particle of which introduced into the latter will so disturb the equilibrium of the particles just surrounding it as to give rise to a fermentative change. This fermenting influence will be gradually communicated to that next to it, and so on, till slowly the change is brought over the whole area as long as there remains a grain of sugar for decomposition. When the boundary is reached, where the solution does not contain ingredients favourable for such changes, the fermentation stops. The larger the quantity of the sugar, the stronger will be the dynamical action. Similarly we have in the soil ingredients for fermentation supplied and kept up by all the causes that we have previously enumerated, viz., dead and decaying vegetable matter and excessive moisture, the result of excessive rainfall, bad and insufficient drainage, rice cultivation, retentive nature of clay, silting up of canals and rivers. By the long continued action of accumulating filth, the ferment is generated,—the spark is supplied to blow up the whole into a flame. This influence is communicated to the adjoining village, till it in its turn affects other contiguous ones. Thus in a series of years, devastation spreads from one village to another. It is thus the disease has travelled from Nuddea to Midnapore. In places where the ferment has not yet reached, the fever is absent or only endemic according to the nature of the soil. This theory accounts satisfactorily for the causation and spread of the disease. I have gone through the several items of food, habits and clothing of the people as well as the nature of the soil and drainage of the villages, and arrived at such contradictory results, that I verily believe that they are of secondary importance, capable of aggravating but not of primarily inducing this perverted state of health.

THE EDITOR'S OUT-DOOR HOMŒOPATHIC DISPENSARY.

For the following tables of new admissions into his Out-door Dispensary, the Editor is indebted to the kindness of Babu Mahesha Chandra Ghosha. The tables speak for themselves. They unmistakably point to the progress homœopathy has already made and is making. Indeed the limit to the number of patients is only prescribed by the limit of the time that we can devote to this object. Already the encroachment upon our time is serious enough to affect our private practice. The morning is the time when people want the attendance of their doctors, and it is the entire morning that is engrossed in the work of the Dispensary. Nevertheless we have been going on with the work without any patronage, or expectation of any patronage, from out-side, and we intend to go on with it, whatever the pecuniary consequences to us personally may be, for the sake of the life-giving truth which Hahnemann had the privilege of bringing to light, and which it is the duty of all, who have the privilege of appreciating it, to be the humble instruments of bringing within reach of every suffering fellow-creature.

It has been represented to us that by thus giving gratuitous medical aid systematically every morning, we not only injure ourselves but likewise the profession. For, it has been argued that at least a part of the number of patients, who avail themselves of this gratuitous aid, would, but for it, have paid for it, and thus so much money is withdrawn from the profession. We readily admit this to its fullest extent, and we do not even deny that such charities are liable to unpardonable abuses. In fact we feel we are often made the victims of this abuse. We see that a considerable portion of our out-door patients can pay for the advice and medicine they receive, and still they do not. We nevertheless continue the practice on the principle that better far that the rich should abuse the charity, than that the poor, the really needy, should suffer from want of it. And the principle has peculiar force in the case of homœopathy. For strange to say, while homœopathy has charitable hospitals and dispensaries in the North-West,* it is still in lack of these in Bengal and in the Metropolis. We publish the following tables, not for the purpose of writing our own eulogies, but simply to show that, however misrepresented by Orthodoxy and consequently unrecognized by Government, homœopathy is being largely appreciated and recognized by the people, and that, therefore, at least one homœopathic institution, combining in itself a hospital and a dispensary, has become a necessity, and must be allowed to have, with other hospitals and dispensaries, equal claims upon the patronage of the state and the public, for its foundation and support. However willing a single individual may be to meet the necessity to the best of his means and opportunities, it must be admitted that it is really hard for that individual to bear upon his shoulders the burden of the many. Besides, however steadily the work might have been done in the past, nevertheless when it has to depend upon one individual, it has to a large extent to depend upon haphazard and chance, and such work should not be allowed to depend upon chance and haphazard.

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* It is due to that philanthropic gentleman, Mr. Ironside, that we should here repeat what we have often said in these pages, that these hospitals and dispensaries in the North-West, (at Benares, Allahabad, and Agra), owe their existence almost entirely to his patronage and indefatiguable exertions. One drawback of these institutions is, that their professional management is in the hands of amateur practitioners, and not of regularly trained medical men. But whose fault is that? Certainly not of Mr. Ironside. Having benefited by homœopathy, his benevolence did not allow him to have its blessings confined to himself, he was anxious that the whole community, the poor in particular, should partake of those blessings. And if he could not get professional men to take up the cause, what could he do? What but start at once with the defective materials at hand? All honor to the amateurs for having upheld the cause of homœopathy at this emergency. But it is high time that the profession should not allow this opportunity to slip of being of service at once to humanity and to science. For, however brilliant the results may be in these institutions, their statistics, so long as they continue under the management of lay practitioners, cannot be made to contribute to the progress of medical science, and the reasons are obvious and not unreasonable. By symptomatic treatment, cures, and often marvellous ones, may be brought about by the lay practitioner, but the simple statement and enumeration of these cures is not sufficient for the advancement of medicine. The actual diseases, with their pathological references, must be given before any thing can be made out of the cases of cures. This can only be expected from men who have had proper training in the science and in the art of therapeutics, which includes collateral sciences, the most difficult and recondite in their nature.

1869.

MONTH.	HINDU.				MAHOMEDAN.				CHRISTIAN, &c.				TOTAL.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
July.	71	5	22	7	8	3	...	1	3	...	2	...	122
August. ...	93	17	27	14	6	...	1	1	3	1	...	...	163
September.	111	19	31	9	11	1	5	1	5	...	1	1	195
October....	84	15	18	8	6	1	...	...	3	...	...	...	135
Novembr...	97	11	16	6	12	3	2	...	1	1	...	...	149
December..	78	9	21	5	7	2	1	...	„	...	1	...	124
TOTAL.......	534	76	135	49	50	10	9	3	15	2	4	1	888

1870.

MONTH.	HINDU.				MAHOMEDAN.				CHRISTIAN, &c.				TOTAL.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
January....	88	8	24	1	9	...	1	...	1	1	...	...	133
February..	77	13	14	1	6	...	...	1	8	...	...	...	120
March. ...	68	5	14	1	6	...	...	1	8	...	...	...	103
April.	65	13	22	4	9	1	...	1	2	...	...	...	117
May.	73	14	20	11	5	2	...	...	...	1	1	...	127
June.	89	21	23	12	6	2	2	1	2	...	...	...	158
July.	125	16	35	15	35	6	1	1	3	2	3	...	242
August. ...	157	20	42	13	20	4	2	1	1	...	1	...	261
September	118	19	26	6	15	1	...	...	5	1	...	...	191
October ...	123	24	19	13	20	3	...	2	...	2	...	...	206
November.	140	18	48	15	20	4	6	2	4	1	2	1	261
December.	121	13	20	6	18	3	4	1	4	...	...	...	190
TOTAL.......	1244	184	307	98	169	26	16	11	38	8	7	1	2109

1871.

MONTH.	HINDU.				MAHOMEDAN.				CHRISTIAN, &c.				TOTAL.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
January....	118	28	21	11	11	1	1	...	1	...	...	1	193
February..	137	25	28	12	9	2	1	...	5	1	1	...	221
March......	159	27	35	9	11	2	...	...	4	1	2	...	250
April.	144	25	29	24	13	4	...	2	2	1	2	...	246
May.........	185	36	46	16	15	4	4	1	8	1	1	...	317
June.	186	36	58	20	18	1	2	1	5	2	...	...	329
July.........	247	42	66	20	29	7	12	4	6	...	...	2	435
August. ...	273	76	83	37	38	3	10	2	6	...	1	...	529
September	242	60	54	19	37	5	5	1	1	...	3	...	427
October....	209	53	50	24	37	7	4	...	3	3	3	1	394
November.	236	34	59	14	48	2	11	...	4	...	...	...	408
December.	238	30	63	20	38	4	4	...	2	1	...	...	400
TOTAL......	2374	472	592	226	304	42	54	11	47	10	13	4	4149

1872.

MONTH.	HINDU.				MAHOMEDAN.				CHRISTIAN, &c.				TOTAL.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
January....	211	33	59	24	29	3	5	...	2	3	1	1	371
February..	230	30	57	25	18	5	6	4	3	...	...	...	378
March......	257	53	69	18	28	4	10	...	2	...	...	1	442
April.......	237	59	71	35	31	3	4	...	8	...	1	1	450
May.	198	60	47	20	15	2	4	1	5	...	1	1	354
June.	191	44	52	30	16	...	4	2	2	...	...	...	341
July.	256	65	72	24	34	4	5	1	2	1	5	2	471
August, ...	294	73	100	49	36	...	4	...	8	1	2	...	567
September.	352	62	95	38	67	9	17	3	2	2	3	...	650
October....	331	73	97	39	88	10	10	5	5	3	...	...	661
November.	417	108	74	34	68	8	15	6	2	1	...	...	733
December..	372	75	102	43	62	6	11	1	3	...	...	...	675.
TOTAL.......	3346	735	895	379	492	54	95	23	44	11	13	6	6093

1873.

MONTH.	HINDU.				MAHOMEDAN.				CHRISTIAN, &c.				TOTAL.
	Adults.		Children.		Adults.		Children.		Adults.		Children.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
January....	294	56	96	23	74	14	17	5	4	1	1	...	583
February. .	292	55	71	22	66	11	11	3	4	7	2	5	549
March......	307	83	97	36	67	11	8	1	8	3	4	1	626
April.	250	47	88	55	44	8	20	7	6	3	3	1	532
May.	320	73	60	50	37	16	11	5	5	3	1	4	585
June.	305	71	92	45	40	11	12	7	7	3	4	5	602
July.	334	60	95	42	68	5	23	4	3	3	7	...	644
August. ...	360	104	144	76	81	16	31	19	9	2	5	5	852
September.	342	104	131	60	109	19	29	22	8	4	...	4	832
October....	446	125	140	69	111	24	32	5	9	3	2	2	968
November.	464	113	110	67	128	21	25	6	10	9	4	4	961
December.	477	90	98	51	100	23	20	8	13	7	5	5	897
TOTAL.......	4191	981	1222	596	925	179	239	92	86	48	38	36	8633

These tables give us the following gross results: There were admitted in—

		Males	Females		Total
*1869	Hindus ...	669	125	...	794
	Mahometans	59	13	...	72
	Christians, &c.	19	3	...	22
1870	Hindus ...	1547	282	...,	1829
	Mahometans	185	37	...	222
	Christians, &c.	45	9	...	54

* The last half year only.

1871	Hindus ...	2966	... 698	3664
	Mahometans	358	... 53	411
	Christians, &c.	60	... 14	74
1872	Hindus ...	4241	... 1114	5355
	Mahometans	587	... 77	664
	Christians, &c.	57	... 17	74
1873	Hindus ...	6408	... 1657	8065
	Mahometans	1164	... 371	1535
	Christians, &c.	124	... 84	208

The average daily admissions were—

4·9	for	1869
5·8		1870
11·4		1871
16.9		1872
23·7		1873

Each new patient receives medicine generally for 3 days, so that, unless well, he presents himself again on the 4th day from his first appearance, and so on, and thus becomes an old patient. In this way we have a large daily attendance of old patients, which was not registered till from the latter end of June 1872. Starting from July of that year we have the number of old patients that attended daily for—

July	1872	1260
August	„	1613
September	„	2103
October	„	1863
November	„	2160
December	„	2373
January	1873	2167
February		1884
March		2137
April		1853
May		2015
June		2083
July		2267
August		2438
September		2370
October		2692
November		2908
December		3011

Thus the average number of daily old patients was—

62·34	for	1872
76·24	„	1873.

So that the daily average of all patients was—

78·24	for	1872
99·94	„	1873.

A glance at the tables (1870-73) cannot fail to show that in the midst of the general rise in the admissions from year to year, there is a certain uniformity in the ratio of the admissions for the months which points to uniformity in their relative unhealthiness. This is found to correspond with the result of general experience. Thus November is found to be the unhealthiest, and February the healthiest, month in the year, a fact which is corroborated by experience which has become authoritative. Next in order to November in point of unhealthiness are August and October; and next to these stand July and September. June, March and May are comparatively healthy months. The healthiest are January, April, and February, the last, as we have said above, occupying the foremost place.

OURSELVES.

With this number the Journal enters upon the seventh year of its existence. There is a gap in its fourth year which we have yet to fill up. The gap extends from February to June 1871. To make up subsequent arrear, which, our readers will please note, is nearly made up by the present number, we have been compelled to leave the gap untouched. We are now, however, able to say that the quintuple number, embracing the period in question, is nearly ready, and will be issued either with or shortly after, the next number. As our readers will find, when it appears, that though out of date, it will not be uninteresting, as we have filled it with much valuable matter culled from the archives of the past, and relating to the early history of an Institution that will ever remain the most glorious monument of British rule in India—the Calcutta Medical College.

In our number for January 1871 while we assured our readers that, "we shall continue to labor, and labor as before and ever in the cause of medical reform, in spite of discouragement from the profession,"—discouragement which was sorely trying to one who had, in a worldly point of view, a bright prospect before him, we could not conceal the fact that "our expenses (of conducting the Journal) were not even half covered by the patronage we receive." In our number for July last we made an appeal on behalf of the Journal—an appeal to the public for more subscribers, and to our subscribers, for the payment of their subscriptions. This appeal, we are sory to say, has not met with the response we had expected. There has been some addition, indeed, to our list of subscribers, but this addition is trifling and more than counterbalanced by the falling off of some of our old subscribers. And with one or two exceptions, the arrears due from our subscribers are still unpaid. Some, we are sorry to say, are on the wrong side of their accounts since the very beginning. We beg to be understood that we do not make these observations in the spirit of complaint. We are too conscious of our own short-comings to do that. Not to speak of the chronic state of arrears into which we have fallen, we are aware that we are perfectly unworthy to represent the latest and the most glorious reform in Medicine, embodying a truth which does not pale in comparison with any yet discovered in the domain of science. We are aware that we have no *claims*, properly speaking, upon the patronage of the public for the Journal as a Journal, far less as a Journal with the pretensions put forth in the title-page and in the prospectus. All that we lay claim to is the *indulgence* of the public, and even that claim is founded upon the fact of the simple existence of the Journal as the only one in the East with those pretensions, which we should beg our readers and the public to look upon not as pretensions but as sincere professions, which it is always our humble endeavour honestly to carry out.

Of the desirableness, and even absolute necessity, of such a Journal, there cannot be the slightest question. While we have Journals in abundance representing this and that and every conceivable school of medicine and their numberless sects, we have not, so far as our information goes, a single one in the whole world which, while it recognizes in the Hahnemannian law the most advanced point yet reached in therapeutics, recognizes at the same time the necessity of, and aims and works at, co-ordinating and harmonizing all the facts of medicine. These facts have accumulated to overflowing. In their present chaotic state they serve but to confound and mislead the beginner, and engender that spirit of scepticism which is so ruinous, morally and scientifically, to the individual who harbours it, out of which his salvation is so difficult, and which is calculated to bring disgrace upon the profession, in an infinitely greater way than all the failures of treatment put together.

For this end, the co-operation of members of the profession of all schools is of the utmost importance. Indeed, it is impossible that such an end could be brought about without such co-operaton. One of the objects for which the Journal was started was to invite and welcome this co-operation. In this country we may be said to have peculiarly favorable opportunities for securing this co-operation. For, in this country, we have medical systems of all orders, genera, and species at work, and under trial in the grand struggle for existence and mastery,—systems from the crudest and the oldest to the most refined and the most recent. And if we have but eyes to see, and intelligence to appreciate, we can make out something, aye, we can, we think, succeed in discovering some order out of this appearently chaotic and strange but interesting spectacle. At least the spectacle is expected to have this salutary effect upon the mind, namely, that it would teach us to be tolerant, to cast off all prejudice and bigotry, and thus prepare us for the better observation and appreciation of truth irrespective of the quarter it might come from. But what is the fact? The very reverse of what ought to be. We have here the war of school against school, of system against system, in a more intense form than anywhere else. The object for which members of the profession here live and work appears to be to make money at as little expenditure of thought as possible. The relief of man's estate is only a secondary consideration, and the discovery of truth is altogether out of the question. Hence the supremacy of routine and tradition upon the mind. The anxiety often is not what is likely to be good for the patient, but what has been done in similar cases by some eminent authority. And when all *pre*scription fails the blame is thrown not upon want of skill of the practitioner, nor upon the fallibility of so-called authority, but upon the gravity of the disease which is represented as having resisted all that human skill could devise. In this way patients are killed, at the same time that the conscience is stifled or satisfied.

As evidence of the love of money at the expense of love of truth we may mention the two-fold aspect in which it has made itself manifest. In one of these aspects we have the sad spectacle of regular practitioners openly betaking themselves to dealing in patent medicine; in another we have the sadder spectacle of other practitioners surreptitiously having recourse to quack nostrums that have obtained some celebrity in particular diseases, or even not hesitating to have recourse in the hour of need to the much despised homœopathic infinitesimals. Not to say that such practice is anything but respectable, it is not difficult to see the disastrous effect it must have upon the profession, by opposing a barrier to the discovery and diffusion of truth.

It is no wonder then, that co-operation of members of the profession for the purpose of educing order out of the chaos of conflicting systems is almost impossible under the circumstances mentioned above. And no wonder that this Journal, being conducted by one who is under the ban of orthodoxy, unanimous only in its hatred of homœopathy, has not only not yet been able to secure for its pages even an attempt at that co-operation, but not even contributions of an orthodox character from practitioners who, while they do not range themselves under our ranks, are tolerant enough to support the Journal if only they can do so without incurring the displeasure of the veterans. This accounts for the fact that even after the lapse of six years of the Journal's existence, we have almost entirely to depend upon our individual efforts. Nothing, in our opinion, is a more serious reflection upon the profession, especially upon the native branch of it, than this fact. The Journal, by its catholic character, offers a capital field to our native brethren for the display of their powers of observation and reasoning, and they should have availed themselves of it to shake off the reproach so often and not unjustly cast upon them, namely, that they leave behind them, within the four walls of their alma mater, all their energy, and activity, and zeal for learning. Why should they eternally lag behind their European brethren? Why should they not vie with them in patient observation, diligent research, and presever-ance under difficulties? Why should they continually go on borrowing and never think of paying back. "I hold every man," said Bacon very justly, "a debtor to his profession, from the which, as men of course do seeke to receive countenance and profit, so ought they, of duty, to endeavour themselves by way of amend, to be a help and ornament thereunto." How many of our native brethren there have been or are to whom these words of the father of modern science can be applied? How many who have been "helps and ornaments" unto the profession, from which they derive their bread and their position and rank in society? and which besides gives them uncommon opportunities to enable them to fulfil the destiny of their being—to afford relief to man's estate and be a glory unto their Creator? To think of these opportunities ought to make every student of medicine proud of his profession. For it is by virtue of the profession that science is almost his monopoly. Inexhaustible fields of knowledge are open before him, and he has only to open his eyes, in order to choose any one of them for his special cultivation. To repeat our own words—

"In his intercourse with his fellow men he can study the peculiar features presented by each with reference to the diseases to which he is subject, to his moral and intellectual character, and to the variety of the race he belongs to, and thus he is enabled to lay the foundation of the physiognomical diagnosis of disease, of a rational system of phrenology, and of ethnology. In his intercourse with the brute creation he can study the diseases each class, each genus, each species, is subject to, the course these diseases run, the means they instinctively adopt for their removal, and thus he can lay the foundation of comparative medicine; he can further study the peculiarities of their physical and mental organization, the variations they present under domestication as well as under purely natural perturbing influences, and can thus help in the solution of the much vexed problem of the origin of species. And so in his mute companionship with the vegetable kingdom and with inorganic nature, he can, if he chooses, sow the seeds of important and even new departments of knowledge. The physical aspect of the globe is undergoing slow but positive changes under the influence of art and progress of civilization. He ought to watch as to whether these changes are beneficial or prejudicial to health; if the latter, he ought to devise measures by which they can be remedied. Of course we cannot think of arresting the natural evolution of things, but we ought to be able to counteract the evils which are calculated to follow in its train."

With these opportunities for the study of the varied phenomena of nature, how is it that native medical gentlemen are so backward in their obvious, imperative duty of adding to the stock of knowledge, professional and collateral? How is it that, since the foundation of the first Medical College in India, now forty years, not a single student can be named who has been engaged in original research. Within this time what revolutions have taken place in the medical and auxiliary sciences! How many new departments of knowledge have been created! And yet how many have kept pace with this progress of knowledge? The minor causes apart, which we have incidentally alluded to already, the chief cause appears, in our humble opinion, to be the want of the habit of writing. This is probably due to want of the requisite preliminary education of the great majority of those who betake themselves in this country to the medical profession. But our graduates ought to rise above this accident in their education. They ought to make up for the deficiency, in order to deserve, and make the most of, the privileges of their calling. The task we set before them is not formidable. When the mind is stored with facts, it is not very difficult to find words to give expression to those facts, if only the attempt is made, and with each attempt the difficulty will vanish. With the habit of writing, the habit of observation will improve. In fact, we cannot know the extent of our ignorance, we cannot know what we have not observed, what we should further observe, unless we put on record what we have already observed. Our earnest request, therefore, to our native brethren is, that they should never neglect to write down whatever they observe. If they do so, they will see that in a short time they will not only be able to write well, but they will be able to observe better; and in a short time a mass of interesting and instructive facts will accumulate at which they will themselves be astonished, and which will be worth publishing for the benefit of the world.

Acknowledgment.

Illustrated Descriptive Guide in the Selection of a Homœopathic Medicine Chest, and General Prospectus of Henry Turner and Co.'S Homœopathic Pharmacies: With which is incorporated a complete list of English and American books and Pamphlets on Homœopathy, reprinted from the 'Homœopathic Medical Directory of Great Britain and Ireland for 1873.'

A noticeable and novel feature in this "Guide" is the design on the wrapper in which Dulcamara, Bryonia Alba, Rhus Tox., Nux vomica, Aconite, Arnica, Belladonna and Gelseminum Sempervirens are faithfully represented. So far as we can see, Messrs. Turner and Co. are the first to have made this design, and deserve great credit for it.

CLINICAL RECORD.

1. *A Case of Cholera. Recovery.*

Reported by S. C. M.

Saturday morning, the 24th January last, my son-in-law, accompanied by two other persons, came to me in great haste and, with evident mental agitation, reported an attack of cholera on his uncle K. C., who desired to place himself under Dr.—'s treatment. Before I could take the doctor to him, another messenger came announcing the alarming state in which the patient lay. There was evidently no small reason for anxiety, particularly as the patient was a man of the most regular habits and the best health, a man who has hardly ever known what sickness is, who for himself has never before been necessitated to call in a doctor. With the doctor I went to the patient at about 9 A. M. and found him restless, owing to suffering from intense pain and gripes in the abdomen. Now he lay on one side and then on another, and again he suddenly sat up in his bed when we had to support him, and after sometime could persuade him to lie down (which he said he could not from the torture) which he did with his head in the opposite direction to that in which it was before, and once more he started up and crumbled himself into a ball over a great pillow (*tákià*) which was in the bed, and so on.

The patient is a very intelligent, sensible man and gave a good account of his attack. As I have said, he was most regular in his meals, hours of sleep, exercise, &c. Whenever he detected the slightest disorder in the bowels he righted himself by fasting and such other means. He had had no irregularity the previous evening, on the contrary he had felt rather more than his usual appetite, and might, he thought, have perhaps done a little too much unconscious justice. He had gone to bed at the usual hour, 9 o'clock, and got his usual sound sleep. Rising as usual early in the morning he felt a slight uneasiness followed by a sharp call of nature, and his evacuation was not of the character he usually had. He decided not to go out on his usual morning walk. Soon he was called to the closet again when he perceived unmistakable signs of sickness. He vomited in addition to purging, and vomited and purged again, with all the distress and other symptoms of cholera. Still he hoped the attack might be a mild one, but he had soon reason to be justly alarmed. Long before every body about him was for bringing in doctors, but he had resisted. Now he himself considered it necessary to seek medical aid, and of his own accord sent the message to me to bring in Dr.—To us he spoke long of death, assuring us that he was not afraid of it, explaining his grounds which were secular, but so far as they went, rational enough, but he scarcely knew his own full mind. He was in a bad state, and his mind must have been colored by his state in a manner not very different from what such a state does men generally. To us the very subject of his conversation seemed to bespeak a consciousness of his condition. For the rest he had, as he told us, better reasons than many possess for being able to meet death, as an inevitable calamity, with more composure. He was desirous of making the best efforts for recovery, and an ancedote of the occasion may be here related as characteristic of the man and as having a more general interest. In spite of his protestation on the subject of death, he seemed very particular as to his treatment. He repeatedly expressed his fears on one head--lest he should be drugged and tortured into a worse state than he, a man of good virgin constitution, unused to doctoring, might even in his grave sickness, be left to himself and nature, by the attentions of a lot of active physicians. His greatest fear was, he again said, that he was a wealthy man and lived within a bow-shot of the medical college, so that he was liable in his helpless condition to have thrust on him by his family and friends a number of doctors attending and consulting. Hence mainly, never having studied or thought much on the claims of the rival systems, his sending for Dr.—, who understood them both and was understood to practise his art in a milder, and as he thought, more discriminating way. Hence he expressed his sense of relief when Dr.—arrived.

The Doctor examined him long—too long as I feared for such a case, but the doctor would not be hurried till he had understood the case—then looked at the evacuations. The case was unmistakably a case of cholera—the stools were characteristic, rice-water like, and containing flakes and shreds of changed mucus. The patient had vomited, and was in a state of semi-collapse. The doctor however prescribed, *Coloc.* 6. One dose seemed to quiet him much. The griping fits recurred indeed, but they were nothing like what they were. A second dose, and the patient fell asleep, with no more return of the gripes and pains of the abdomen, and no more vomiting or stools.

Gleanings from Contemporary Literature.

TREATMENT OF CHOLERA BY THE HYPODERMIC INJECTION OF CHLORAL HYDRATE.

Report dated 10*th October* 1873, *from Civil Surgeon, Kheri in Oudh, to Deputy Commissioner, Kheri.*

In compliance with the request of the Commissioner, I have the honor to submit a brief report concerning the nineteen cases of cholera, which I treated by the Hypodermic Injection of Chloral Hydrate; the solution used was of an uniform strength throughout and contained one part of the medicine to ten of water.

2. On the 9th of last month, news was received that cholera had broken out in the village Chaoneh about a mile from the Sadr; two deaths had already occurred; I arrived at the village at 5 o'clock P. M. and found five persons ill, one of whom, a Bhargin, died just as I entered her house; of the others, two were in severe and two in mild collapse when the treatment was begun—*all were cured.* On the 11th one case occurred, an old man, Durzi caste, in mild collapse when first seen—*cured.* On the 12th two cases occurred, one a boy in severe collapse when seen; the other a woman, collapse impending—*both cured.* On the 16th a Kúrmin was attacked in mild collapse when treatment was commenced—*cured.* On the 19th a Kúrmin was attacked in severe callapse when seen—*cured.* On the 21st a Durzin was attacked in severe collapse when treatment was commenced—*cured*; this was an exceedingly bad case. On the 22nd three cases occurred, collapse impending in each when treatment was begun—*all cured.* On the 24th three cases occurred, two in mild collapse, and collapse impending in the third when treatment was begun—*all cured.* On the 25th a Kúrmin was attacked in intense collapse; an hour and a half after the injections were made, the pulse could be felt again at the wrist; I then had to leave; directions were given to the Native Doctor to repeat the injections if the pulse did not improve in an hour, the directions were not fully carried out, the woman *died* about four hours after. On the 28th a Brahman was attacked in intense collapse when treatment was commenced; *died* an hour and a half after; this was the only case in which the treatment had no effect whatever; it was a terribly rapid one. On the 29th a Barhai was attacked in mild collapse when treatment was commenced—*cured*; this man since died from exhaustion, he was about 70 years old and very feeble. No cases have occurred since the 29th September.

3. In the Hardui district last year, cases of cholera were treated with Chloral Hydrate, but the remedy was given by the mouth in almost all the cases. Dr. McReddie had not a favorable experience of the hypodermic method; the solution he used was treble the strength of mine and caused sloughing and irritation; nothing of this kind followed in any one of my cases beyond a very slight hardness at point of puncture and a little pain; there was no local evidence, twenty-four hours after that the injections had been made. Dr. McReddie was very successful; 82 per cent. of his cases recovered, but taking his very bad cases alone he lost nearly 50 per cent.; 89 per cent. of the above cases recovered, and 72 per cent. of the very bad ones.

The injections were made in the arms and thighs, the Canula of the Syringe being plunged pretty deeply into the flesh ; the greatest quantity of Chloral used in any of my cases was sixteen grains or eight injections ; if the case was a bad one four injections were made at once, then nothing was done for an hour, when the treatment was repeated if necessary ; as a rule, sleep was induced within two hours, nothing else was done except mulling the limbs and giving occasionally some cold boiled water.

4. There is no necessity for me to say much as to the rationale of the treatment. Surgeon Hall, R. A., the originator, has made it public. Chloral Hydrate being a powerful sedative soothes the irritated nerves, and so relaxes the contracted vessels, the blood is once more uniformly distributed, and consequently the pulse re-appears at the wrist, the cramps and burning abdominal pains subside, sleep is induced, the respiration becomes regular, the discharges lessen, the face fills out, the voice becomes stronger and the natural secretions are restored.

I sincerely hope that this form of treatment of cholera will be given an extensive trial.

Letter from Doctor Hall, dated 18th October 1873, to Commissioner of Sitápur.

In compliance with your request I have the honor to make the following statement, on the subject of the treatment of Cholera by the Hypodermic Injection of Chloral Hydrate.

1. In May 1869 I wrote a paper, entitled "Thoughts about Cholera," which was published in "The Indian Annals of Medical Science" for March 1870, No. XXVI. In that paper I advanced a theory, that in the cold stage, or collapse of cholera, instead of exhaustion of the nervous system (as was generally supposed there is *intense irritation* of certain sets of nerves ; and I suggested that the principle which should guide us in the treatment of this condition, was the endeavour to get the nervous system quieted by the action of *pure sedatives ; not* to give stimulants, as was very frequently done. I pointed out that it was of little use giving medicines by the mouth, on account of the frequent vomiting : and I recommended the practice of the hypodermic injection of sedatives *in the state of collapse.*

2. When I wrote, Chloral Hydrate had only recently been discovered in Germany, I had never used it, and was not aware of its true action on the nervous system. Last August twelve months, Surgeon Major Collis of the Buffs and myself conducted a series of experiments on large bull-frogs, to ascertain the action of numerous drugs, on the heart and nerves. We found that Chloral Hydrate is one of the most powerful sedatives that we possess.

3. On the 21st August last a soldier of "the Buffs" was admitted into Hospital at this station suffering from cholera. Surgeon Major Collis kindly placed him under my care, as he knew that I was anxious to treat a case, not having had an opportunity of doing so for nearly four years. When I saw the patient he was in collapse. I dissolved (10) ten grains of Chloral Hydrate in (100) one hundred drops of water and injected this quantity subcutaneously in four different places in the arms. The effect was most satisfactory, reaction being completely established in about 5 hours. The man recovered without any bad symptoms, and there were no signs of ulceration where the solution had been injected.

4. I mentioned the result to Dr. Higginson, Civil Surgeon of Kheri, Oudh, (among others), and he said he would try this plan if he had an opportunity. He has done so, and the report he has furnished shews the success of it. Statistics will show that no other plan of treatment hitherto adopted has been followed by so many cures.

5. I attach great importance to the strength of the solution used (1 part in 10 of water) if it is too strong, it probably will not be absorbed into the blood, and only cause ulceration or sloughing.

6. The following is the plan of treatment that I recommend for the three stages of cholera. During the premonitory diarrhœa (which is almost always *painless*), (30) thirty drops of Dilute Sulphuric Acid in a large wine glassful of strong Champhor Water every hour. If this does not stop it and vomiting comes on, commence the hypodermic injection *at once.* If the patient is first seen in collapse inject 10 grains dissolved in 100 drops of water in 4 or 5 different places according to the size of the Syringe. This will probably be enough, but if reaction does not commence within an hour, inject again. There is generally a great craving for cold water, which may be given in any quantity; never mind if the patient vomits, as reaction proceeds he will retain it. *But no opium or stimulants are to be given in collapse.*

After reaction if *secondary fever* supervenes, quinine in varying doses, every one or two hours, may be given with milk, beef-tea and mild stimulants.—*The Gazette of India*, February 14, 1874.

GALL'S DISCOVERY OF THE PHYSIOLOGY OF THE BRAIN, AND ITS RECEPTION. BY T. SYMES PRIDEAUX.

> "Strictly speaking you only play the part of puppets in a show; when certain cerebral organs are put in action, you are led according to their seat to take certain positions, as though you were drawn by a wire, so that we can discover the seat of the acting organs by the motions. I know that you are blind enough to laugh at this; but if you will take the trouble to observe, you will be convinced that by my discovery I have revealed to you more things than you were aware of."—"GALL, *in a familiar Letter to his Friend* BARON RETZER, 1798."

If we are to accept the verdict passed admidst mutual congratulations by the Physiologists of the period assembled at Bradford, we are on the eve of obtaining a revelation of the physiology of the brain by the localised application of electricity to its surface. Facts carefully observed and accurately recorded must always possess an intrinsic value, but it is possible to err in their interpretation; that this has been done to some extent with reference to the experiments in question, and exaggerated expectations founded on misconception indulged in as to the amount and accuracy of the knowledge to be expected from this source, is to me abundantly clear.

Enthusiasm in the pursuit of knowledge is doubtless amongst the highest of the characteristics which distinguish the noblest specimens of humanity from the common herd of mankind. As an evidence of mental activity, the jubilation with which the announcement of the results of applying electricity to the surface of the brain has been received is in the highest degree satisfactory. The more cordial the reception accorded these experiments, however, the more prominently the question obtrudes itself,—What are the distinctive differences in the path pursued to attain one common object by Fritsch, Hitzig, and Ferrier, and the method of Gall, that should occasion the results of the former to be welcomed with acclamation, whilst those of the latter were received with the hail of sneers, scoffs, ridicule, misrepresentation, and contumely? To the student of the human mind the difference, or rather contrast, offers a curious and interesting problem.

Can we find a partial explanation of the anomaly in the more purely physical character of the recent method of research—that the subject of attention in the one case is a movement visible to the senses, in the other a mental quality, an abstraction which presents no sensuous object to the mind? What is certain is, that many men have great taste and capacity for the observation, description, and arrangement of material facts, who are singularly deficient in the power of contemplating abstract existences. The majority of men appear to require a physical substratum for their thoughts. Their ideas are almost limited to *images*, or pictures of outward objects presented by the external senses; or secondly, to *conceptions* of actions being a change in the relation of material objects; or thirdly, to bodily sensations arising from the action of the external senses. Either the specialised senses—taste, smell, hearing, and sight—or the diffused sense of feeling, co-extensive with the surface of the body, and hence adopted as a generic term, and applied metaphorically (with its opposite poles, pleasure and pain) to all internal affections. They have not adequate power of abstraction to separate the subjective from the objective. Not analytical power sufficient to dig phantoms from their consciousness, isolate them from their surroundings, and hold them continuously before their mental vision for contemplation. They catch a glimpse of a figure for a moment, but before they have time to study its features it dissolves away like a wreath of mist. Now the subject matter of Phrenology is mental qualities, not material objects; whilst, in addition to its abstract basis, it superadds the doctrine of the dependence of the mental functions on certain external relationships of form and size, successfully to appreciate which demands an amount of preliminary study hardly likely to be expended on the problem, by those to whom one of the factors in the equation presents the aspect not merely of an unknown, but of an incommensurable quantity. *Non omnia possumus omnes*, indeed, it is usually those whom some predominating instinct prevents being too discursive and keeps in one path of study by whom additions to the sum of human knowledge are made. Let us be thankful to the student, whose range of thought is limited to objects of sense, for his contributions to his own department; but do not let us regard him as an authority in others, nor commit the shallow blunder of citing his indefference to, or disbelief in, the invisible rays at the higher extremity of the spectrum as an argument for their non-existence. We have cultivators of the physical sciences, mathematicians, astronomers, natural philosophers, chemists in abundance, plenty of naturalists, ready to seize and describe all the peculiarities in form, size, weight, colour, distribution, and habits, of everything that has life. We have even a limited supply of metaphysicians and psychologists, who deal with *abstractions* and *words* in contradistinction to *things*, and inhabit an ideal world of their own. The dealers in things and the dealers in abstractions mostly dwell apart, and too often regard each others pursuits with ill-disguised contempt.

Now the phrenologist requires to unite to a considerable extent the capacities and tastes of both classes; to combine the powers of mental analysis—the facility for detaining abstractions before the mind's eye for study—of the metaphysician and psychologist, with the instinct of observation and quick perception of physical differences by which the naturalist is distinguished—and in the fact that individuals who combine the two phases of capacity will be less numerous than those who possess one of the qualifications singly, we see an explanation of the cause why the scientific cultivators of phrenology are fewer in number than either the physicists or the metaphysicians.

In scanning the causes of the hostility Phrenology has so widely encountered, amongst others we must not omit to notice its close bearing on the personality of individuals. Men with little heads, little minds, but great vanity, rebel against a standard of capacity which gauges them correctly. A science which renders it possible—

> . . . . . "A des signes certaines
> Reconnaitre le cœur des perfides humaines,"

will always have antagonists to whom such an idea is distasteful. The whole of the genus humbug, the empirics and impostors of the day, and men conscious of being at bottom thoroughly dishonest and unprincipled, instinctively recoil from a system which threatens to unmask their moral deformities to the eyes of the world, and reveal their true features, despite a whole wardrobe of trappings of duplicity. Napoleon boasted of having greatly contributed to put down Gall. His own medical attendent, Corvisart, one of the greatest physicians France ever produced, was an admirer of Gall, and vainly endeavoured to introduce him to the Emperor. "Corvisart," says Napoleon, "was a great partisan of Gall, and left no stone unturned (fit l'impossible) to push him on to me, but there was no sympathy between us." In short, Napoleon confessed he felt the greatest aversion for those "who taught that Nature revealed herself by external forms."

Again, the bulk of mankind have no doubt been organised by nature to lead a life of action, to do, and not to think. In youth they are plastic, and readily receive the impression stamped by their teachers, but by mature age the receptivity of childhood has vanished, and the clay of which they are composed refuses all attempts to mould it afresh ; and especially is this the case where the egotistic feelings of self-love and vanity outweigh the pure love of knowledge for its own sake. Such men may indeed imbibe new ideas, and acquire an increase of knowledge as they grow older, but the new knowledge must have some points of affinity and harmony with the old, to be cordially welcomed. Above all, it must not threaten the subversion of those existing canons of belief which have hitherto guided them on life's journey, or it will infallibly excite antipathy and antagonism. Every day we have the spectacle of the direct testimony of facts being ignored and rejected without examination, from the inference that they are opposed to some cherished belief. Even the scientific *par excellence*, the professed phliosophers, are not exempt from this human frailty ; touch but the ark that enshrines the object of their worship, and you shall see the bigotry and intolerance with which they credit the theologian rivalled, if not outdone. As at the advent of Phrenology it encountered the antagonism of the religious world from its supposed tendency to materialism ; so, at the present hour, many of our leading physicists shut their eyes to the curious phenomena of (the so-called) spiritualism, and open their mouths to assail its investigators, because they fear that these phenomena clash with that materialistic philosophy which constitutes the staple article of their scientific creed.

How vast a portion of our present stock of scientific knowledge would be non-existent if no one had been found to "take an interest" in the phenomena of magnetism ! and can the most bigoted apostle of the new positive-physical gospel venture to assert that a domain of fact as wide in its extent and fruitful in its result may not lie hidden, awaiting conquest by man in this force of source unknown, the conditions attending the presence of which, though yet undiscovered, we may be assured, are governed by laws as definite and immutable as those of gravitation. We do not yet know how to multiply mediums at pleasure, as we do magnets, because we know neither the species of loadstone nor the kind of manipulation required, but all honour to those who are engaged in the research.

Apparently as long as psychologists were content to frame theories out of their own consciousness, and confined themselves to abstractions, their researches created no antagonism in the physicists who occupied themselves with the study of material objects and their properties and functions; but when these saw their own peculiar province invaded, and the physiology of the highest organ of the body, to them an enigma, for the solution of which neither their tastes nor capacities were adapted, declared to be unravelled by a method of study for which they had no proclivity, and by an individual who had altogether surpassed them in their own province of anatomy, their pride rebelled, and their wounded *amour propre* found vent in denunciations as outrageous and absurd as ever greeted the author of a new discovery. English metaphysicians, and immaterialist divines also, led by English anatomical authorities to regard the propounder of these new doctrines as an ignorant quack, were not slow in joining the chorus of detraction and abuse against the audacious innovator, who overthrew all their cherished theories as to the independence of the mind on organisation—the former viewing the doctrines of Gall with profound contempt and disgust as tending to degrade man to the level of brutes, the latter with repugnance and alarm as threatening to sap the foundations of religion.

Dr. John Gordon, a lecturer on anatomy of great reputation in Edinbrugh, in an article in the "Edinburgh Review," in 1815, said, "We look upon the whole doctrines taught by these two modern peripatetics (Drs. Gall and Spurzheim), anatomical, physiological, and physiognomical, as a piece of thorough quackery from beginning to end." Lord Jeffrey, in the same periodical, in 1826, designated the doctrines as "crude," "shallow," "puerile," "fantastic," "dull," "dogmatic," "incredibly absurd," "foolish," "extravagant," and "trash." The "Quarterly Review," in their notice of Madame de Stael's "L'Allemagne," censured her for being "by far too indulgent to such ignorant and interested quacks as the craniologist Dr. Gall," and in No. XXV.. the same Review declared the new science to be "sheer nonsense," and designated Dr. Spurzheim as "fool." The Rev. Thomas Rennell, Christian advocate at Cambridge, in his "Remarks on Scepticism, especially as it is connected with the subjects Organisation and Life," assures his readers that the system of Gall and Spurzheim "is annihilated by the commonest reference to fact," spoke of "its absurdities," of this "masterpiece of empiricism," and designated it as "the flimsy theories of these German illuminati." Whilst as late as 1836, Sir Charles Bell wrote—"The most extravagant departure from all the legitimate modes of reasoning, although still under the colour of anatomical investigation, is the system of Dr. Gall. Without comprehending the grand divisions of the nervous system, without a notion of the distinct properties of the individual nerves, or having made any distinction of the columns of the spinal marrow, without having even ascertained the difference of cerebrum and cerebellum, Gall proceeded to describe the brain as composed of many particular and independent organs and to assign to each the residence of some special faculty."

The insular ignorance of Gall's anatomical discoveries, position in the scientific world, and true character displayed in these insulting criticisms, is no less disgraceful than astounding. Professor Hufeland, an anatomist and physiologist of European reputation, thus expresses himself concerning Gall:—"It is with great pleasure and much interest that I have heard this estimable man himself expound his new doctrine. I am fully convinced that he ought to be regarded as one of the most remarkable phenomena of the 18th century, and that his doctrine should be considered as forming one of the boldest and most important steps in the study of the kingdom of nature. One must see and hear him to learn to appreciate a man completely exempt from prejudices, from charlatanism, from deception, and from metaphysical reveries. Gifted with a rare spirit of observation, with great penetration and a sound judgment, identified, as it were, with nature, he has collected a multitude of signs of phenomena which nobody had remarked till now—has discovered the relations which establish analogy between them—has learnt their signification—has drawn consequences and established truths, which are so much the more valuable that, being based on experience, they emanate from nature herself."

"The worthy Reil," says Professor Bischoff, "who as a profound anatomist and judicious physiologist stands in no need of my commendation, has declared, in rising above all the littleness of egotism, that he had found more in the dissections of the brain performed by Gall than he had conceived it possible for a man to discover in his whole life-time !"

"Loder," continues Professor Bischoff, "who certainly does not yield the palm to any living anatomist, has expressed the following opinion of the discoveries of Gall :—'The discoveries of Gall in the anatomy of the brain are of the highest importance, and many of them possess such a degree of evidence that I cannot conceive how any one with good eyes can mistake them. I refer to the great ganglion of the brain—to the passage of the corpora pyramidalia into the *crura* of the brain and the hemispheres —to the *fasciculi* of the spinal marrow—to the crossing of the fibres under the pyramidal and olivary eminences—to the recurrent fibres of the cerebellum—to the commissures of the nerves—to the origin of the motor nerves of the eyes, of the trijeminal nerves, of those of the sixth pair, &c. These discoveries alone would be sufficient to render the name of Gall immortal ; they are the most important which have been made in anatomy since the discovery of the system of the absorbent vessels. The unfolding of the brain is an excellent thing. What have we not to expect from it as well as from the ulterior discoveries to which it opens the way? I am ashamed and angry with myself for having, like the rest, during thirty years, sliced down hundreds of brains as we cut a cheese, and *for having missed seeing the forest on account of the great number of trees it contained*. But it serves no purpose to distress one's self, and to be ashamed. The better way is to lend an ear to truth, and to learn what we do not know."

Which latter piece of advice I commend to the notice of those little great men, the eminent compilers, who,—devoid of the original genius which, by perceiving relationships before unknown and unsuspected, confers new principles on science,—would fain set themselves up as physiological authorities on the strength of their book-making capacities.

Not only were the great and important additions made by Gall and Spurzheim to the anatomy of the nervous system fully admitted by Cuvier, but their position as the highest authorities on the subject was so fully recognised in Paris, in 1813, that the article, "Anatomie du Cerveau," for the "Dictionnaire des Sciences Medicales," was confided to their care.* All English anatomists, however, have not followed the suit of Dr. John Gordon and Sir Charles Bell, in recording at once their jealousy and their ignorance by absurd denunciation of Gall. Mr. Grainger, the greatest English authority of his day on the anatomy of the brain and spinal cord, writes, "The true anatomy of the cerebrum was perfectly unknown till the researches of Gall, and it is due to the character of this eminent man and of his pupil, Spurzheim, to state that all our knowledge of the anatomy of both the brain and spinal cord has resulted from their inspections ;" and

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* The necessary result of the old method of dissecting the brain is thus pithily described in this article :—"On a mis en usage une méthode de dissection très-défectueuse ; on ne fesait que des coupes horizontales, verticales, ou oblique, par en haut on par en bas et on enlevait successivement des tranches de cet organe. De cet maniere, *on commencait par detruire les connexions des differens appareils et on procedait sans egard peur l'ordre dans lequel les parties se suivent naturallement*"

Joshua Brookes, in his lectures, and Mr. Solly, in his well-known work on the anatomy of the brain, have done full justice to the anatomical discoveries of Gall.

The method pursued by Gall, in seeking to ascertain the functions of the brain, was by comparing the power of manifesting particular mental faculties with the size and condition of particular portions of this organ. Phrenologists believe this method to be vastly superior to all others, and, in justification of this opinion, point to the rich harvest it has produced in contrast to the barren results which have hitherto been obtained by the employment of mutilations and the application of stimuli. Is there, at the present moment, a single physiologist in a position to declare that, after qualifying himself to judge of the development of the organs by the requisite study, the result of careful examination has convinced him that the localities assigned by Gall to the primitive mental faculties are erroneous? Why is this sound and legitimate mode of studying the functions of the brain neglected and ignored by physiologists in general, "who seem desirous of exhausting every possible variety of error before they will adopt it?" Men of science are usually eager to avail themselves of every practicable means in the pursuit of knowledge, but it would appear to be a desideratum to discover the functions of the brain by other than phrenological methods.

In addition to employing mutilators, Rolando trephined the cranium of various quadrupeds, and applied one of the poles of a voltaic pile to different portions of the brain, whilst the other was applied to different parts of the body. With reference to these experiments of Rolando, and the experiments by mutilation of Flourens, Gall remarked :—

"It is a subject of constant observation that, in order to discover the functions of the different parts of the body, anatomists and physiologists have always been rather disposed to employ manual means than to accumulate a great number of physiological and pathological facts,—to combine these facts, to reiterate them, or to await their repetition in case of need,—and to draw slowly and successively the proper consequence from them, and not to announce their discoveries but with a wise reserve. This method, at present the favorite one with our investigating physiologists, is imposing from its materiality ; and it gains the approbation of most men by its promptitude and its apparent results. But it has also been constantly observed that what has appeared to have been incontestably proved by the mutilator A., either did not succeed with the mutilator B., or that he had partly found in the same experiments all the proofs necessary to refute the conclusions of his predecessor. It is but too notorious that similar violent experiments have become the scandal of the Academicians, who, seduced by the attraction of ingenious operations, have applauded with as much enthusiasm as fickleness the pretended glorious discoveries of their candidates.

"In order that experiments of this kind should be able to throw light on the functions of each of the cerebral parts, it would require a concurrence of many conditions impossible to be fulfilled. It would first require that we should be enabled to restrain all the effects of the lesion to that portion only on which the experiment is performed ; for if excitement, hæmorrhage, inflammation, &c., affect other parts, what can we conclude? and how can we prevent these inconveniences in mutilations either artificial or accidental? It would be necessary that we should be able to make an animal whose brain has been wounded and mutilated—who is filled with fear and suffering, disposed to manifest the instincts, propensities, and faculties, the organs of which could not have been injured or destroyed. But captivity alone is sufficient to stifle the instincts of most animals."

Have the results attained by the recent experiments of Fritsch, Hitzig, and Ferrier a tendency to invalidate these opinions of Gall, or do they not rather confirm their correctness? I presume it will hardly be pretended that the function of a single portion of the brain has yet been discovered by these means,* and I venture to think there is but little probability of their effecting such a discovery in the future, notwithstanding the exaggerated expectations held out. At present it is palpable that physiologists are quite adrift as to the real signification of the phenomena elicited, the true interpretation of which must be sought in the discoveries of Gall, who maintained the competency of the surface of the brain to originate muscular movements in opposition to the current doctrines of physiology and the asserted proof to the contrary afforded by the experiments of Flourens, and other mutilators, and whose familiarity with the fact is recorded in the extract from his letter to Baron Retzer, in 1798, prefixed to this article.

The explanation of the phenomena obtained by the application of stimuli to the surface of the brain, is found in the fact that those innate faculties which require the aid of the muscular system to carry out their behests have the power of originating the movements necessary for this purpose; and hence, when Dr. Ferrier applied a galvanic current to the cortical surfaces of the organs of the instinct "to take food," "to seize prey," "to destroy," "to fight," "to construct,"—movements "of mastication," "of striking with the claws, or seizing with the mouth," "of biting and worrying," "of scraping, or digging," ensued: whilst the stimulation of the same locality (constructiveness) which put the fore paws and hind legs in action in the rabbit, would, in the beaver, superadd the motion of the incisor teeth and the tail. What can be more palpable than that the inferences to be obtained from such experiments are not only far more vague and indefinite than those furnished by the employment of the phrenological method, but absolutely incapable of ascertaining the shape, and defining the boundaries, of the organs, as has been accomplished by Gall in the case of locality, the shape of which he ascertained to be similar in dogs to its form in man. In short, little more can be said on behalf of these experiments at present than that in a cloudy and obscure form they lend a vague general confirmation (not required) to the correctness of the localities assigned to the primitive faculties by phrenologists.

Amongst the many eminent men whose researches and discoveries have shed honour on the profession of medicine, Gall will assuredly by posterity be accorded a place second to none. Man had looked on man, and scanned the face of his brother in sunshine and in storm, in friendship and in anger, for countless thousands of years, without having succeeded in seizing and individualising a single primitive faculty, much less in discovering its seat. The advent of Gall broke up the long night of darkness and error as to their own being, under which the human race had slumbered for ages. Sensation, perception, memory, judgment, imagination—the idolæ of the past—the stock properties of every psychological system from that of Aristotle downwards, instead of being primitive faculties, were clearly demonstrated by the most masterly analysis and the most unanswerable arguments to be simply different degrees or consecutive modes of action proper to each of the elementary intellectual faculties, and necessarily variable in strength in relation to subjects specifically distinct. Gall studied the maximum or minimum exhibition of certain passions or capacities compared with the extreme or defective development of certain parts of the brain; and when a vast number of concurrent experiences had satisfied him of a connection, named the primitive faculty by the simplest words indicative of its function to be found in the vocabulary of every-day life. He thus replaced the phantoms of the metaphysicians, which explained nothing, by terms which speedily asserted their vitality by being constantly heard in the mouths of the people to assist them in defining and describing their fellowmen, thus at once obtaining that sanction from the spontaneous dictates of popular common-sense, which is the surest test of the truth of all fundamental ideas.

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* A fact conclusive on this point, and which places in a striking light the vagueness and want of precision of the results obtained, is the circumstance that that eminent compiler, Dr. Carpenter, sees in these experiments "a remarkable confirmation" of his transcendently absurd and ridiculous notion that the intellectual organs are seated in the back of the head.

It is a common doctrine that discoveries are seldom made by an individual greatly in advance of the scientific mind of the day, or without other investigators having been placed by the existing state of knowledge on the same track as the more fortunate discoverer, who is thus merely credited with having by a short date anticipated other investigators in bestowing a new fact, or idea, on mankind. With regard to the discovery of phrenology, however, made at the close of the last century by Dr. Gall, if we may judge by the fact that what he discovered the great mass of his contemporaries never succeeded in recognising, even when the locality for research was pointed out to them, and the means of observation lay in profusion everywhere around, there appears every reason to believe, that but for the appearance of a man of his rare and exceptional genius, the vast contribution to human knowledge for which the world is indebted to his labours would still have been slumbering in the womb of futurity. I venture to assert that no body of doctrines were ever established on a series of observations more cautiously conducted, rigorously scrutinised, and patiently verified than those of phrenology by Dr. Gall, who devoted his entire life and all his pecuniary resources to this object, finding his reward in the consciousness of the importance of his discoveries, and that prophetic vision of the future which placed him above contemporary jealousies, and caused him to exclaim in calm self-reliance, "This is *truth*, though opposed to the philosophy of ages!"

"I have always," says Gall, "had a consciousness of the dignity of my researches, and of the extended influence which my doctrine will hereafter exercise on all the branches of human knowledge, and for this reason I remain indifferent to all that may be said either for or against my works. They differed too much from the received ideas of the times to be appreciated and approved at first. . . . . My views of the qualities and faculties of man are not the fruit of subtle reasonings. They bear not the impress of the age in which they originate, and will not wear out with it. They are the result of numberless observations, and will be immutable and eternal like the facts that have been observed and the fundamental powers which these facts force us to admit."—*The Quarterly Journal of Science*, January 1874.

VIVISECTION.

The British Medical Journal (January 3).

THE allegations of cruelty to animals which have been brought against M. Schiff, the eminent physiologist of Florence, to whom science owes many valuable discoveries, have been made the text of several unsparing and unqualified denunciations of vivisection in the public prints. M. Schiff is the special scape-goat on this occasion, as he has been before. Several years ago he was obliged, for the sake of peace and quietness, to discontinue his lectures, which were experimentally illustrated, owing to a great outcry raised against him by certain well-meaning and humane countrywomen of our own resident in Florence. Cruelty to animals is said to prevail in Italy to a lamentable extent; and visitors to Rome are shocked at the horrid brutality and want of feeling displayed by owners and drivers of wretched half-starved cattle. It is a laudable desire of the Society for the Prevention of Cruelty to Animals to see this state of things amended; and that they may be succeessful in their endeavours, must be the heartfelt wish of all right-thinking men. When, however, they seek to accomplish their object by attempting to put a stop to the scientific investigations of M. Schiff, or hope to strengthen their cause generally by raising a popular outcry against vivisection, as practised by physiologists, they at once lose the sympathy of all who have human progress and the relief of human suffering at heart, and who can take broad and philosophical views of what is requisite and necessary for the furtherance of the common good. Whether vivisection is necessary or not, is a matter on which not every one is fitted to decide. As to its coming under the objects for which the Society in question exists, need not be very difficult to answer. When accused of cruelty to animals, many experimenters have contented themselves with retorting on their accusers the fearful sufferings which the recognised sports of this country must entail on many poor wounded creatures which escape immediate death. This appears to us very false ground on which to rest a justification of the practice of vivisection. There may be difference of opinion as to the morality of field-sports; but science, like Cæsar's wife, should be above suspicion.

There exists great confusion in the popular mind between cruelty and the infliction of pain. The two things are essentially different. It is often the greatest cruelty to avoid inflicting pain. Vivisection is supposed by many to consist in wantonly cutting up animals and enjoying their writhings and sufferings, like a young Nero who transfixes an insect and exhibits fiendish delight at its contortions. Were it so, nothing could be said in its defence. But surely men engaged in the study of the science of life and the art of cure may be credited with nobler motives. Experiments on living animals are absolutely necessary to elucidate many problems, the solution of which is fraught with the most important immediate and ultimate results in relation to the theory and practice of medicine and surgery.

It would be an utterly false and ill-directed sentiment which should denounce such endeavours to mitigate the sufferings of humanity by ascertaining the laws of life and the nature of disease. Even if vivisection were practised without any attempts to render the subjects of it insensible to pain, yet with such objects in view it surely could not be termed wanton cruelty. If so, then surgical operations, vaccination, etc., must be condemned. These are all instances of infliction of pain by processes of vivisection which are not usually regarded by even the most humane as objects for inquiry into by the Society of Prevention of Cruelty to Animals.

Nothing can be more unjust than to attribute to scientific investigators a disregard for the feelings of animals. We happen to know eminent vivisectors who are consistent supporters of the humane purposes of the society for the Prevention of Cruelty to Animals; as, indeed, what educated Englishman, and, above all, what medical physiologist, is not? Moreover, there are few experiments made on living animals by modern physiologists which would not be vitiated or complicated by the physical expression of suffering; so that, for two reasons, animals are usually rendered insensible by ether or chloroform. Some experiments, it is true, would be vitiated by the administration of an anæsthetic; but they are the exception, and not the rule. It is a libel on M. Schiff to say that he utterly disregards the sufferings of the subjects of his experiments. We have the best authority for stating that he hardly ever performs an experiment on an animal without previously administering ether or using chloral. Frightened and timid ladies, who are prepared to imagine all horrible things, can readily convert the howling of a dog or the mewing of a cat into some dreadful orgy of the human monster who delights in torturing animals. Thoughtful persons will not on that account raise an unreasoning outcry against the earnest labours of scientific men for the good of humanity. That a person should be found who pretends to be scientific, and styles himself the author of a work on *Medicine and Surgery one Inductive Science*, and yet denies that vivisection has ever been productive of benefit to humanity, would be incredible, but that persons are often found of eccentric character but high pretensions, who are ignorant of the fundamental facts of research with which they profess to be conversant. We can hardly hope, perhaps, to have heard the last of these periodic outbursts; but it is not difficult to show that this method of research, properly and humanely applied, is one which may exhibit a more truly humane and philanthropic spirit than that which would lead to the maintenance of ignorance and perpetuate preventable suffering.

The Lancet (January 3).

THE *quæstio vexata* of vivisection is again before the public, and we hope the discussion will not close until a solution be arrived at in accordance with the dictates of humanity and the interests of science. Curiously enough, the resuscitation of the controversy comes from Italy, where cruelty to horses is so notorious that one hardly looked for so much sympathy for the occasional sufferings of dogs. Professor MORITZ SCHIFF, who holds the Chair of Physiology in the Royal Superior Institute of Florence, in the course of a series of researches, has, it seems, operated on a number of living dogs, whose cries were such as to annoy the inhabitants of the neighbourhood. The Syndic, Signor PERUZZI, and Professor SCHIFF, have accordingly been indicted by these good people for nuisance; but before the trial came on the question at issue was settled out of court, the defendants, it is stated, having pledged their word that the offence shall not be repeated.

For aught that we can learn Professor SCHIFF continues his vivisections as before, but with the difference that he anæsthetises his victims and prevents their cries. Now, no one, however attached he may be to the lower animals, can reasonably complain of the practice of vivisection when performed sparingly, and with due precaution that the subject shall feel no pain. But for experiments of the kind Professor SCHIFF is performing, physiology would be much less accurately understood than it is now; errors the most mischievous would still prevail; and the cognate science of pathology would still have its frontiers to rectify. Compare our knowledge of the function of digestion now with what was known of the same function fifty years ago, and then say to what do we owe our immense advantages in distinctness and trustworthiness of information? Simply to vivisection, which, in the hands of BIDDER and SCHMIDT, CLAUDE BERNARD, and others, exposed to view certain processes, mechanical and chemical, which were previously veiled in mystery. The experiments conducted by HUGHES BENNETT and his disciples some years ago on the liver and its functions, physiological and pathological, were also pregnant with new data in correction of universally received doctrine; while the investigations of FERRIER and others on the localisation of function in the cerebrum—so full of promise for the treatment of the insane—constitute other cases in point where science would have been reduced to a standstill but for the crucial test of vivisection.

Yes; the far more enlightened and essentially humane treatment of disease which distinguishes the present from the past generation, springs, as every practitioner knows, from the more penetrating insight we have obtained into the vital processes—insight which would have been for ever withheld but for the ocular demonstration of these processes afforded by vivisection. The practice has more than justified itself already; and, judiciously and humanely performed, will continue to justify itself. But having said thus much, we are very far from vindicating the indiscriminate, not to say wanton, indulgence in this last resort of the thoroughly trained physiologist by mere novices or *dilettanti* in the science. We have no reprobation strong enough for the practice, far less common now than when MAJENDIE came amongst us, of impaling butterflies and cockchafers, dissecting frogs, and torturing cats, as pursued by medical students in their raw enthusiasm. We cannot sufficiently condemn the dulness of soul which, under the pretence of cultivating "science," can subject even the humblest of the lower organisms to the torture of the scalpel and the induction coil. Vivisection is warrantable only when the thoroughly trained physiologist has exhausted every other means of arriving at the truth and failed; and even then it should be resorted to only under conditions which reduce the victim's sufferings to a minimum, if not to *nil*. Practised rudely and wantonly vivisection is not more hurtful to the wretched subject than to the moral nature of its practitioner, and it is precisely among the less masculine, and therefore crueller races—the Latin rather than the Teutonic—that inhumanity to the brute creation, even without the scientific plea of vivisection, goes hand in hand with a lower morality, whether public or domestic, and a less genial regard to the feelings and interests of one's fellow-man. We have too much faith in the English head and heart to be at all disturbed by the fear that the practices of the French and Italian veterinary schools and physiological laboratories will ever be acclimatised among us.

Science, *per se*, is never cruel; and her latest teaching, whether rationally founded or not, that the lower are linked to the higher organisms in an indissoluble chain of evolution, will, if practically observed, rather strengthen than relax our sympathies for the brute creation. The nature-worshipper can be unkind to none of nature's creatures, and the old adage, "*Homo sum*," reaches further than its Roman author could have conceived. But even in the halls of science "offences will come," and such as have been lately disclosed in foreign schools should be promptly protested against and put down. Here, and we would fain hope elsewhere, the conditions under which vivisection should be practised ought never to be other than these: that none but accredited teachers should be allowed to perform the operation, and that even then the number of animals allowed to each school for the purpose should be restricted by law, while anæsthesia should invariably have been induced before the experimenter begins.

Nature (January 8).

The question of the propriety of vivisection has ever and anon cropped up for the last two centuries, and learned and unlearned persons have not been found wanting to condemn the practice. Amongst the latter the term vivisection has been taken to mean the dissecting of animals alive, with no other motive than curiosity or a malignant desire to be cruel to animals.

This arises from the utter and entire ignorance, on the part of the great mass of the public, of the scope and nature of physiology or the laws of life. If the elements of this noble and most useful science were taught in our schools as they should be, the unmeaning outcry against the practice of "dissecting live animals," as it is called, would not be heard. People would then know that the wonderful knowledge now possessed by man of the functions of his body has mainly been acquired by experiments on living animals, and that by the practice of vivisection is not meant the dissection of living animals, but the performance of experiments by which the nature of the functions of living beings may be ascertained.

Whatever excuse may be made for the public on account of their ignorance, there ought not to be any for men belonging to the medical profession, who should know the history of the science of physiology and the dependence of all true practice of medicine and surgery on the laws of life, mainly gained by humane and careful experiments upon living animals. These men would be answerable for much human suffering and premature death if they compelled men of science to give up the practice of studying the laws of human life and arrest the hand of Science in investigating the functions of living animals by inspection and experiments.

We feel almost ashamed in the present age to have to speak of the grand results which have been reaped by mankind from the observations of our great physiological discoverers in experiments on living animals. To begin with Harvey, whose name is a household word amongst us, and one of the grandest on the long page of England's discoverers ; it is no perversion of words to say that he could not have discovered or demonstrated the circulation of the blood without the aid of vivisection.

In his great work, "An Anatomical Disquisition on the Motion of the Heart and Blood in Animals," he heads the second chapter "Of the motions of the heart as seen in the dissection of living animals." In this work he gives detailed accounts of his experiments, and also of those performed before the noblest and most learned in the land, who did not object to Harvey's experiments, but felt they were witnessing the demonstrution of a truth that would for ever be a benefit to mankind. Had public opinion, had the Government of the day, instead of encouraging Harvey proceeded to procecute him for cruelty to animals, then mankind would have lost a discovery that has saved myriads of human lives from torture and premature death by disease.

The discovery of the circulation of the blood produced an immense revolution in the practice of medicine and surgery. Counting the pulse became an intelligent aid to the diagnosis of nearly all diseases. Operations for the relief of disease were undertaken with fearlessness and the greatest success. The nature of aneurism and its means of cure were now understood. This last disease was studied and the surgical operation for its cure almost perfected by experiments on living animals by John Hunter. This great anatomist also made most important contributions to our knowledge of the nature of venous absorption, by his operations on animals. Nearly all the advances that have taken place in the treatment of aneurism since the time of Hunter have been made by experiments on on living animals, amongst others we may name those of Spence, of Edinburgh.

Only to mention names rising to the surface from the greatness of their discoveries, we refer to Sir Charles Bell, to whom we are indebted for a knowledge of the nature of sensationary and voluntary nerves and their double origin in the spinal cord. These discoveries were made by experiments on living animals, and belong to a series which cannot be performed by the aid of anæsthetics, as the very essence of them consists in demonstrating that whilst one set of nerves is devoted to the feeling of pain, the other is the means of producing locomotion.

Another almost equally important discovery, the nature of the excito-motory action of the nervous system, was demonstrated by experiments on living animals by Marshall Hall. To say that these discoveries of Bell and Hall have had no influence on pathology and therapeutics, is to deny the experience of every medical practitioner in the kingdom—is to proclaim that the science of medicine is now practised on the system pursued by physicians and surgeons previous to the time of the discovery of the circulation of the blood. Numerous are the discoverers who have made great advances in our knowledge of the functions of the nervous system, by observations on living animals, who still live to be honoured for the advances they have made in that science which leads to the amelioration of human suffering. We need but mention here the names of Brown-Sequard and Ferrier. No human mind could have guessed at the conclusions at which they have arrived, but they have done so by the sure and certain method of observing facts in the living organism.

We might go on and fill our pages with the memories of great men who have not hesitated, for the benefit of mankind and the advancement of Science, to sacrifice the life of the lower animals. Majendie was accused in Paris of cruelty to animals, but his experiments led to a more accurate knowledge of the influence of medicines on the animal frame and the introduction of a number of new remedies, which are still in common use. Blake, by the introduction of saline substances into the blood of living animals, showed what was the action of these matters on the blood, and he produced a sensible effect on the practice of medicine.

To the instructed this will seem a meagre list; but we hope enough has been said to show that to deny the utility of experiments on living animals is to deny that medicine has advanced at all during the last two centuries and a half, and to admit that the guesses of uninstructed practitioners are as good as the practice of the most cultivated practitioners of medicine and surgery.

Against this proof of the benefits of vivisection it has been urged that man has no right to inflict pain on animals. The same argument has been urged against the destruction of the life of animals at all, and the adoption of a vegetarian diet has been the result. It is surely not needful to answer the last argument here, but in a degree the answer is the same against giving pain to animals; if we take animal life for the purpose of food, it is only taking the life we have given us for the purpose of our existence; and in giving a minimum of pain to animals we give it for the higher purposes of securing human life and freedom from pain. It is curious to see those who defend the cruel sports of fox-hunting, hare-hunting, and partridge and pheasant shooting exclaim against the cruelty of vivisection. Yet it could be clearly shown, we believe, that those physiologists who are in the habit of prctising vivisection would not be found at Hurlingham taking part in pigeon-shooting, or meeting with the hounds in any part of the country. In fact, so far from producing a hardening effect on the mind, these experiments seem to engender in the mind of the observer a love and a care for the brute creation, that does not exist in the mind of an ordinary person. A celebrated entomologist, in answer to the objection made to the pursuit of his science, the destruction of the life of insects, made answer that his habit of observing insects had induced him at various times to save more lives of insects—as flies from the cream-jug and tea-cup—than he had ever destroyed to make his entomological collection.

The question still arises whether the experiments that resulted in the discoveries to which we have referred should be repeated for the instruction of a class, or be regarded as final? Many physiologists think that the renewal of the experiments in the form of a demonstration before a class is not necessary. This position, however, cannot be maintained, if regard is had to the good of mankind. He would be a poor chemist who did not re-perform the experiments of those who had gone before him; and the natural philosopher could not make progress in his science if forbidden to repeat the observations of his predecessors. It is not only necessary to make good practitioners of medicine and surgery that these experiments should be repeated, but it is necessary for the advancement of the science of physiology.

Of course all these experiments should be performed with the greatest attention to diminishing pain to the utmost extent. Happily, by the use of anæsthetics, we can now do this so that an animal does not suffer more than it would in passing out of existence in any other way. And we are glad to find whilst writing this, that Prof. Schiff, of Florence, who has been so unrighteously assailed for these experiments, in a letter to the *Times*, completely refutes all the charges brought against him, never failing to administer anæthetics in the performance of these operations.

Medical Times and Gazette (January 17).

Our daily contemporary the *Times* has lately published several letters under the headings of "Vivisection" and "Cruelty to Animals in Italy," some of which have already been noticed in our "Topics of the Day," and which form a quasi-scientific controversy worthy of observation. We shall be very glad if any real and lasting good comes out of the correspondence; but so far we recognise only two results—the filling up of a certain amount of space in our contemporary's columns, and the absolute clearing away of some accusations of cruelty made against Professor Schiff, of Florence. The controversy was excited by a letter of the Roman correspondent of the *Times*, alluding to legal proceedings which had been commenced against Professor Schiff in Florence, and commenting on what he assumed to be the Professor's dealings with animals in his physiological laboratory, in a spirit only to be excused by ignorance or explained by prejudice. He stated that in the Physiological Museum "the vivisection of animals is practised on a large scale, to the frequent distraction of the inhabitants of the adjoining houses, to whom the screams of the tortured animals allow no rest"; spoke of "the Professor who cuts up living cats and dogs"; said that "the question whether vivisection is at all necessary, or even in any manner useful, for scientific purposes," has in London, Paris, Berlin, and Vienna been settled in favour of the dumb creation; and so on. This production drew from Mr. E. Ray Lankester a letter, in which he defended the celebrated director of the Physiological Laboratory of Florence against what was, if anything, a charge of wanton and useless cruelty, and in which he asserted that the Professor is "one of the most humane and beloved of Florentine physicians," and pointed out the great value and actual necessity of vivisection, rightly used, for the advancement of physiological science. Further, he declared (what no one who has any real knowledge of the matter will dispute) that by the most genuine and eminent students of science it is employed only for the purpose of enlarging our knowledge, and is used in the most humane and considerate manner. Other writers also entered the field. One, writing under an initial only, taxed Professor Huxley with inciting boys and girls to practise vivisection, and to produce intense pain; his only foundation for the charge being apparently the fact that the Professor, in his admirable "Lessons in Elementary Physiology," is not content with mere dogmatic teaching, but gives evidence and proofs of his statements. Another, Mr. George Macdivain an author of works on medicine and surgery, declared that vivisection has never "made any discovery of any value," and, indeed, that "there is no difficulty in proving, on the inexorable testimony of facts, that vivisection is not only useless but exceedingly mischievous." While a third, Dr. Arthur De Noe Walker (we like to give him his full name) out-Herod in his attack upon Professor Schiff and his denouncement of vivisection, which, in common with the most ignorant and prejudiced of its opponents, he is placed to speak of as dissecting animals alive. This gentleman has studied much abroad, and his experience has been very unfortunate, for he says: "All the eminent and qualified experimenters I have studied under, both in France and in Italy, as far as I could judge, seemed to me hardened and heartless, and Professor Schiff was not an exception;" and certainly this is very true of the learned Professor, if we are to believe Dr. Walker's statements, for he adds, "The keeper of the Dog's Home at Florence told me he had made over no less than 700 dogs to him (the Professor), and I have no hesitation in saying, from past experience, that 680 of them were tortured for nothing. I say distinctly—for nothing; because to dissect an animal alive, simply to show the students that which has already been proved and established over and over again, is inhuman, and utterly unworthy of any one calling himself a scientific man." This, it may be remarked, is all in reply to Mr. Ray Lankester's statement that Professor Schiff is "one of the most humane and beloved of Florentine physicians;" and Dr. Walker further adds, "The Professor in question does not practise as a physician, and--whether quite justly or not, I do not pretend to say,--but every time I pay my yearly visit to Florence, two-thirds of the persons I speak with on this painful subject couple his name with execrations." Mr. Lankester replies by "reasserting that Professor Schiff does to some extent practise as a physician," and states that he had only twice seen the Professor experiment, and that he then made use of chloral to prevent pain. So we have a direct conflict of testimony as to the Professor's character as a man and as a scientific experimenter; and we will not say one word as to which witness--judging from reputation, and the intrinsic evidence afforded by their letters—is most worthy of credence. Happily, however, this side of the controversy has been completely settled by the letters from Dr. Alexander Herzen and from Professor Schiff himself. Dr. Herzen has been the Professor's assistant for five years, and says, "I know that he never made a single experiment upon a living animal without rendering it first insensible by means of ether or chloroform, at least, in all those cases in which the nature of the experiment was such as to let him presuppose the possibility of pain being suffered by the animal." And we last week published the Professor's own statement of the great and unremitting care he conscientiously takes to avoid giving pain in his experiments; not only, in all operations likely to prove painful, putting the animals previously into a profound sleep, "which is maintained during the whole of the operation," but also having "all the animals killed, in which these experimental injuries might subsequently cause pain, immediately after the experiments, and before they have entirely returned to consciousness." The Professor also expresses his regret that the action, which had been commenced against his laboratory as a nuisance, "should have been interrupted without the tribunal having been able to investigate the truth or falseness of the facts upon which the adversaries base their demands." The Roman correspondent of the *Times* had stated that the suit had been adjourned owing to the absence of the counsel for the plaintiffs, and that no further notice of it had since appeared in the Florentine journals, and added that this was "probably because the point at issue had been privately and amicably adjusted, and the defendants had pledged their word that the offence shall not be repeated." The Professor's letter disposes of that probability.

There remains the question of the usefulness and rightfulness of vivisection properly and scientifically employed. We need not observe that this is far from being the first time that the propriety and the utility of vivisection has been disputed, or roundly denied. The subject is sure to turn up for discussion every now and then, and one of our chief reasons for noticing the present controversy is that it is a good specimen of the way in which the matter is handled in letters in the public journals. By the unlearned, and even by those who (being members of our own profession) ought to be, to some extent at least, better informed, vivisection is spoken of as the practice of "dissecting animals alive," and it is asserted that it never has been, and never can be, of any use for the advancement of medical knowledge! We do not believe that any good can be obtained by the discussion of such a matter in a daily paper, and do not regret, therefore, that it appears to have been dropped at present. But we cannot help expressing some surprise that the usefulness of physiological experiments by vivisection should be ignored or denied in the country of Harvey, Charles Bell, Marshall Hall, John Hunter, and other great physiological discoverers, and that any student of physiology or medicine can be found to suppose that this means of investigating the functions of living animals is no longer permitted in France, Germany, or England. All physiological experiments ought, of course, to be performed with the utmost care and attention to the prevention of pain; and while science has now placed in the hands of experimenters many sure ways of doing this, we have no manner of doubt that the necessity for employing them is, in the fullest extent, very generally, if not universally, recognised and acted on.

We have to tender our best thanks to the Editors of the following Periodicals for regularly exchanging with us :—

The Indian Medical Gazette.
The British Journal of Homœopathy (H. Turner & Co., London).
The Monthly Homœopathic Review (H. Turner & Co., London).
The American Journal of Homœopathic Materia Medica.

The United States Medical and Surgical Journal.
The American Homœopathic Observer.
The Western Homœopathic Observer.
The American Homœopathist.
The New England Medical Gazette.
El Criterio Medico (Madrid).
La Reforma Medica (Madrid).
La Homœopatia (Bogota).

(We have not received these Journals for some time past.)

The Indo-European Correspondence.
The Hindoo Patriot.
The Bengalee.
The Indian Mirror.
The Bengal Times (formerly *The Dacca News*).
Native Opinion (Bombay).
The Englishman : Saturday Evening Journal.
The Indian Daily News.
Mookerjee's Magazine. (New Series.)
The Bengal Magazine.
The People's Friend.
The Oudh Excelsior.
Sir William Jones's Works. (*Publishing in Series.*)
The Calcutta Excelsior.

The Soma Prakása (Bengali).
The Hálisahar Patriká (Bengali).
The Bámábodhini Patriká (Bengali).
The Banga Darsan (Bengali).
The Amrita Bázár Patriká (Bengali).
The Samáj Darpan (Bengali).
The Sahachara (Bengali).
The Saptáhika Samachára (Bengali).
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THE MATERIA MEDICA.

34.—Clematis Erecta.—Flammula Jovis.

Nat. Ord. · Ranunculaceæ.

Habitat. Sunny hills, bushes and sides of forests of Central and Southern Europe.

Off. Part: The whole plant when flowering.

Old School Uses: Hardly any. Lindley in his *Medical and Economic Botany* speaks of it as an *unsafe vesicant.* Baron Stoerk is the only one who has made any practical use of it, and he speaks of its advantage "in certain forms of chronic headache, melancholy, secondary syphilis (venereal ulcers, buboes, bone-pains,) fungous tumors, and even ulcerated cancers at the lips and breasts, various fungous excrescences on the dorsal surface of the hands, and lastly in cases of chronic humid exanthem, of which he relates an example, but in terms too vague to render it possible for us to designate the disease of which he means to speak. Be this as it may, the pathogenesis of clematis, although still very incomplete, accounts for the success which Stoerk obtained with this plant in the cases where he prescribed it almost at random."*

---

* Teste : *Materia Medica,* p. 595.

Concordances.

Moral and intellectual faculties.—Calc. cocc. ignat. merc. *ph-ac. puls.* SIL. *sulph.* zinc.

Seat of the diseases.—Alum. ars. bell. bry. CALC. carb-veg. *caust.* cham. cocc. HEP. kali. LYC. MERC. natr-mur. nitr-ac. *n-vom.* petr. phosph. *ph-ac. puls.* RHUS. SEP. SIL. *spig.* staph. SULPH. sulph-ac. RHUS. veratr.

Morbid states and sensations.—Alum. arn. *bell.* bry. *calc.* cham. chin. cocc. graph. ignat. lyc. *merc.* mezer. natr. n-vom. phosph. plat. *puls. rhus.* sep. spong. *sulph.* sulph-ac.

Glands.—BELL. *bry.* calc. carb-an. CON. merc. phosph. *puls.* sil. SULPH.

Bones.—Asaf. calc. *puls.*

Skin.—Amm. amm-mur. ant-crud. ARS. bell. bov. calc. carb-an. carb-veg. caust. con. creos. dulc. *graph.* hep. kali. *lach.* led. *lyc.* magn. MERC. *nitr-ac.* petr. *phosph.* puls. RHUS. SEP. SIL. STAPH. SULPH. viol-tr.

Sleep and dreams.—*Calc.* n-vom. *phosph.* sil. *sulph.*

Time.—Acon. arn. aur. *calc.* con. natr-mur. nitr-ac. phosph. rhus.

Exacerbations.—AMM. *ant-crud.* ars. *aur. bell.* CALC. cocc. *colch.* con. dulc. HEP. *lyc. merc.* n-mosch. *n-vom. puls.* RHUS. samb. sep. *sil. spig.* STRONT. *sulph.*

Concordances in general.—Amm. ant-crud. ars. aur. *bell.* bry. CALC. caust. cocc. *con.* graph. *hep. lyc.* MERC. nitr-ac. n-vom. *phosph.* ph-ac. PULS. RHUS. *sep.* SIL. spig. staph. stront. SULPH. thuj.

Antidotes.—Bry. camph.

Hahnemann's Preface.

This plant grows along hedges and fences upon heights. The various potencies of its acrid juice, which ought to be squeezed out of its fresh leaves, shortly before the plant begins to blossom, may be used against a number of affections which have their origin in the abuse of mercury and are complicated with psora, in dangerous eruptions of the head and skin, several affections of the urinary organs, strictures of the urethra and various kinds of very troublesome inflammations of the eyes. Dr. Stapf has found this remedy useful in orchitis and indurated swellings of the testes consequent upon mismanaged gonorrhœa. At a more remote period its virtues have been praised by Von Stœrk in cases of cancerous ulcers of the lips and mammæ, spongy excrescences, tophi, inveterate eruptions of the skin, peculiar kinds of chronic headache, and melancholia. Smelling of Camphor moderates the too violent effects of the drug; Bryonia is said to appease the toothache of *Clematis.*

This drug has been proved by Drs. S. Hahnemann, Franz, Gutmann, F. Hahnemann, Langhammer, Stapf, Foissac.

ANALOGOUS REMEDIES.—1. Bell., Bry., Canth., Caps., Caust., Merc., Rhus.—2. Puls., Ran., bulb. et scel., Staph.—3. Ars., Calc., carb., Hep. s., Lyc., Sass., Sulph.

Pathogenetic Symptoms.

Mind :—

. Preoccupied by sad thoughts and by apprehension of approaching misfortunes.

. Peevish and dissatisfied without any cause.

. Out of humour, taciturn, does not wish to walk out.
. Want of inclination to talk, it passed off in the evening.
5. Indifferent, silent, almost thoughtless.
. Staring look.

Head :—

. Obtusion and gloominess of the head, in the region of the forehead, with inclination to vertigo.
. Gloominess and heaviness of the head, early in the morning, when rising.
. Tight aching of the head in the forepart of the brain, more violent when walking than when sitting, with heaviness of head (after 7 hours and a half).
10. Tight aching in the whole of the right side of the head, rather in the bones than in the brain.
. Drawing headache, with some slight pressure, in the sides of the skull.
. Drawing pain in the left side of the forehead (after 2 h.).
. Boring pain in the left temple.
. Grinding in the right half of the brain, when walking.
15. Shocks in the brain, from behind forwards.
. Hammering sensation in the head, in the evening when lying down.
. Burning and cutting pain in the left side of the forehead; it is most violent when the skin is drawn tight.

Scalp :—

. Eruption of painful pimples on the forehead.
. Eruption on the hairy scalp.
20. (Humid vesicles on the occiput and nape of the neck.)

Eyes :—

. Pain in the eyes, pressure in the middle of the left eye-ball.
. Stitches in the inner canthus of the eye.
. A painful stitch in the inner canthus of the left eye as from a sharp and pointed body, lasting some minutes (after 13 h.).
. Smarting in the eyes, which was greatest when closing them; upon opening them again, they were very sensitive to the light.
25. Smarting pain in the eyes, especially in the margins of the lids.
. A kind of sore smarting in the eyes, with lachrymation and injected state of the veins; when closing the eyes, the smarting became more violent and the eyes became so sensitive to the light that he did not dare to open them again; the sight became quite obscured.
. Burning pain in the upper lid of the right eye.
. Burning pain in the inner canthus of the left eye.
. Inflammation of the eyes with lachrymation.
30. Inflammation of the inner canthi, and faint, weak sight.
. (Inflammation of the margins of the lids with ulceration.)
. (Chronic ophthalmia, particularly in scrofulous persons.)

Ears :—

. Pain in the ears, fine, pecking stitches in the interior of the right ear.

. Burning pain of the left external ear.
35. Ringing before the ears.

Face :—

. Burning pain in the left cheek.
. Eruption of pimples on the forehead (after 5 h.).
. A number of pimples, especially on the forehead; they come on wich a fine stitch and are somewhat painful to the touch.
. Pimples above the eyebrows, on the root of the nose, chin, tip of the nose; they contain some pus and are only painful when touched.
40. Burning and cutting pain through the left side of the lower lip, as if it were being cut to pieces (after 5 h.).
. Itching vesicle on the lower lip, close below the vermilion border; water oozed out from it, after which the place became covered with a tough skin (after 3 d.).
. Drawing stitches from below upwards in the left side of the upper jaw; they are synchronous with the pulse.
. Eruption of painful pimples in the upper lip.

Teeth and Jaws :—

. Swelling of the submaxillary glands, with hard little tubercles, throbbing, tight, as if they would ulcerate; they are painful when touched and excite a toothache.
45. Toothache in the last molar tooth which was hollow; when in contact with the other teeth, even when these were not affected with pain, that tooth was very painful, the pain becoming much worse when bread got into the tooth.
. Toothache; it was tolerable during the day; but when lying in the bed, it became so violent that it would drive one mad; it could only be alleviated by keeping quiet.
. Toothache, so violent that it would drive one to despair, accompanied by tossing about in the bed, weakness of the limbs and anxious sweat, on account of which one cannot bear being uncovered; the whole night.
. The toothache spreads over the whole of the temporal region, as high up as the vertex.
. Toothache unfits him for any kind of work, especially for thinking.
50. Dull pain in a hollow tooth, it is only alleviated for a short while by applying cold water, also by air coming out of the tooth; this caused a stitch in the tooth, as if something had become raised in the tooth.
. A stitch in the tooth, which then darted upwards through the whole of the left side of the face as a drawing and shooting pain synchronously with the pulse, accompanied by a jerking and straining pain in the ear and painfulness of the eye during motion.
. Jerking, shooting and drawing toothache in the left upper jaw, at times in one, at times in another tooth; the pain affects all the teeth; without one being able to point out the tooth affected.

. Shooting jerks in a tooth, extending across the zygoma as far as the ear in the shape of drawing jerks, the ear then being affected with a straining pain; the eye is likewise affected, painful, brooks neither motion nor light, the eyeball being painful, to the touch.

. Jerking, shooting and drawing toothache in the left upper jaw, affecting all the teeth in turns, without one being able to say which.

55. Jerking and drawing toothache by day, increased by smoking tobacco, and alleviated only for a few minutes by firmly pressing a handkerchief against the tooth.

. The hollow tooth feels as if it were longer and is painful to the slightest touch; at the same time a quantity of water runs out of the mouth.

. The gums of the left lower molar teeth feel sore, most so when eating.

Mouth:—

. Dull, boring stitches in the root of the tongue.

. Dryness of the tongue, early in the morning, when waking up.

60. Sputa mixed with blood.

Gastric Symptoms:—

. Satiety which lasted a good while; he was able to take his meal with an appetite; but immediately on eating, he felt as though he had eaten too much and did not require any food.

. Nausea after a meal, while smoking.

. Nausea after smoking, which produced a sensation of weakness in the lower extremities; they appear to stagger and he had to lie down.

. Eructation, three times, (immediately.)

Abdomen:—

65. Pain, as from bruises, in the region of the liver, when touching it, or when stooping, for two weeks.

. A contractive cutting pain in the right splenic region and the neighbouring parts of the abdomen, when walking.

. Grunting in the abdomen, as if it were empty (after 1 h.).

. Pain in the right abdominal ring, pressing from within outwards, as if hernia would protrude, or had already protruded.

. Jerking pain in one of the inguinal glands.

70. Swelling of an inguinal gland; bubo.

Stool:—

. Frequent stool which became more and more thin, without any colic (after 3 d.).

Urinary Organs:—

. Urgent desire to urinate, without any pain.

. Long-lasting contraction and constriction of the urethra; the urine can only be emitted drop by drop, as is the case in spasmodic stricture of the urethra.

. He is unable to void the urine at once; the emission of the urine was frequently interrupted, before it was completed; afterwards the remainder of the urine was involuntarily emitted in drops; during the period of stagnation he felt at intervals a burning and tearing in the anterior part of the urethra.

75. Frequent micturition, but little at a time.
. Diabetes.
. Painless and copious emission of reddish urine (after 5, 6 h.).
. Emission of puriform matter.
. In the beginning of an emission, the burning sensation is greatest; stitches in the forepart of the urethra during the emission, the smarting and burning continuing even after the emission; tearings in the forepart of the penis when not urinating.
80. Painful drawing in the spermatic cord when urinating, extending upwards into the abdomen (after 24 h. and on the 6 d.).
. During micturition one experiences lancinations extending from the abdomen to the chest, more violent when breathing.
. The urethra is painful to the touch.

Male Genital Organs :—

. When touching the testes, they feel painful as if they had been bruised, accompanied by drawing and stretching in the inguinal region, the left thigh and scrotum; this latter experienced a clawing pain when touching it or when walking.
. Drawing pain in the testes and the spermatic cord from below upwards.
85. Swelling of both testes.
. Swelling of the scrotum.
. Painful sensitiveness of the testes (3 d.).
. Swelling of the right half of the scrotum, which became enlarged and then descended considerably together with the testicle; for twenty-four hours.
. The sexual desire became excited (1, 2 d.).
90. Loathing of sexual intercourse during the day, even during the erection, as if he had satisfied the sexual desire to excess.
. Involuntary erections by day.
. Violent erections with stitches in the urethra, lasting several hours (3 d.).
. Violent, drawing pain in the left spermatic cord (3 d.).
. Pollution the first night after taking the medicine, and a second one on the succeding day during the siesta.
95. A burning pain in the caput gallinaginis during the emission of semen in an embrace.

Female Genital Organs :—

. The menses appear eight days before the time, and are more profuse than formerly.

Cold, Catarrh :—

. Sneezing, early in the morning (after 28 h.).
. Violent, fluent coryza, a watery liquid sometimes rushing out of his nose involuntarily,
. Short and hacking cough when smoking, this being one of his habits.

Chest :—

100. Aching in the whole cavity of the chest, independent of breathing (after 10 h.).
. Dull stitches in the chest which are a little more violent when breathing.
. Dull stitch in the right side of the chest, when breathing.
. Dull stitches, resembling shocks, in the whole left side of the chest and abdomen, which extorted from him shrieks (after 15 d.).
. Sharp stitches in the region of the heart, from within outwards.
105. Tearing pain in the forepart of the chest, above the heart.
. Induration of a gland below the nipple, painful when touched.

Superior Extremities :—

. Aching in the upper arm, (after 48 h.).
. Aching in the bend of the elbow, when stretching the upper arm.
. Violent, drawing stitches in the left forearm, in any position of the limb, (a. one hour and a quarter.).
110. Sharp, violent, drawing stitching in the wrist-joint, while walking in the open air, (after 11 h.).
. Fine, stinging pain in the whole surface of the hands, after moistening them with the juice and afterwards washing them with water.
. Drawing tearing in the right thumb, both when at rest and in motion (after 9 h.).
. (Spreading blisters on the swollen hands and fingers, aggravated by cold water.)
. (Arthritic nodosities in the finger-joints.)

Inferior Extremities :—

115. Pain in the hips, for three days.
. Eruption of large pustules around the loins; which are very painful to the touch.
. Dull stitches in the right loin, which are only felt when not breathing.
. Drawing and stretching in the right thigh, sometimes very painful and then reaching even as far as the penis (after 8 h.).
. Tearing pain in the right thigh, when sitting or lying.
120. A boil on the thigh.
. Shooting tearings in the knee.
. Drawing in the knee and thigh after a walk, resembling a tearing, but not felt in the joint.
. Heaviness and fatigue of the legs, for 2 days.
. Dull stitches in the left calf, when sitting.
125. Drawing and tightness in the foot which is affected with an ulcer, when walking.
. Continued feeling of soreness in the ball of the right heel, as if it had become pithy by leaping (after 6 h.).
. Tingling in the forepart of the sole of the right foot, as if it had gone to sleep.

. Violent itching in the toes, in the evening, after going to bed; it invites one to scratch and is accompanied by sweat between the toes.

. Violent sore pain in the left big toe, towards the inner side, greatest when at rest.

Sleep:—

130. Lassitude and drowsiness after a meal, which obliged him to lie down, accompanied by violent beating of the arteries; when being waked, he was unable to rouse himself and sank back again into a state of slumber.

. Constant drowsiness, with want of disposition to labor (after 4 h.).

. Drowsiness and yawning when sitting (after 3 h.).

. In the evening he is for a long time unable to fall asleep, contrary to his habit.

. Although his eyes closed continually and he felt very tired, yet he was unable the whole of the night, to close his eyes; he felt a dry heat internally.

135. Uneasy sleep, at night, with tossing about, throwing off the cover of the bed, and dreams which he distinctly recollected in the morning.

. In the morning, when waking up, he does not feel refreshed; he sweats a litle and then feels inclined to sleep; he cannot bear being uncovered on account of a disagreeable feeling of coldness.

. Drowsiness and weariness, when waking up in the morning; he would like to fall asleep, but he feels too tired.

. A variety of dreams disturbs his sleep.

. Uneasy dreams at night.

140. Vivid, sometimes anxious dreams.

. Anxious dreams at night for instance about a fire.

. He dreams that he had been arrested on account of a crime of which he was not guilty.

. Vivid and sometimes voluptuous dreams.

Fever: -

. Shuddering over the whole body when slightly uncovered, even the air is warm.

145. Profuse night sweat.

. (Quartan fever, with subsequent sweat.)

Skin:—

. Burning pain or sensation of heat in several parts of the body, without any redness.

. Itch-like pustules over the whole body.

. Lancinating shocks in the wound, in the evening, after going to bed; they are as regular as the pulse; also at 3 o'clock in the morning.

150. Tingling and throbbing in the ulcers; stitches in the edges when touching them.

. Throbbing pain in the ulcer, early in the morning.

. Burning pain in the ulcers.

General Symptoms :—

. Jactitation of the muscles in almost all the fleshy parts of the body.

. Distinctly perceptible pulsations through the whole body, especially about the heart.

155. Great inclination to be in the open air.

. Sensation in the body, early in the morning, as if a pollution had taken place or had been suppressed.

. A sort of groaning (vibratory sensation) through the whole body, after lying down, especially on the right side, upon which he was resting.

. Lassitude in all the limbs, the knees have no support and bend easily ; after a walk (after 3 h.).

[**Peculiarities** :—

Skin hardened, callous.
Pulse excited, with throbbing in the veins.
One-sided heat, right side.
Home-sickness.
Complaints predominant in inner angle of eye, lower lip, hollow of elbow, sole of foot.
Sexual desire prevalently weak.
Complaints from the sun-shine.
Cough predominantly dry.
Aggravation night and morning.
Remission during day and evening.
Worse on awaking.
 before breakfast.
 when moving diseased part.
 during continued standing.
 when stooping.
 from touch.
 from eating bread.
 from washing and moistening diseased part.
 from warmth of bed.
 from cold.
 from uncovering.
 when lying on right side.
 after stool.
 from smoking.
Better during and after sweat.
 when lying with head high.
 from warmth.
 from wrapping up.
 during rest.
 lying on left side.
 when standing still after motion.
 after breakfast.
Ailments from abuse of mercury.—*Gross's Comp. Mat. Med.* By Hering.]

EDITOR'S NOTES.

REGENERATION OF TISSUES.

Les Mondes (Jan. 29) gives the following passage as illustrative of the end and spirit of M. Demarquay's recent magnificent work *On the Regeneration of Tissues* :—" As the result of the study in which we have engaged ourselves we see that all our tissues regenerate themselves with greater or less facility; certain tissues presenting, for example, a very great facility for regeneration. Of the tissues which have offered to us indisputable examples of regeneration, we may mention bone, nerve, epithelium, cartilage, &c. The muscular tissue is still the tissue of which the regeneration is most contested. Our researches have apparently clearly demonstrated to us the regeneration of tendon. Thus, in proportion as our means of investigation will permit us to examine most attentively the evolution (development) of our tissues we shall see that regeneration is a general property of living matter; and the time is perhaps not distant when we shall be able to say, *all our tissues regenerate themselves.*

EXTIRPATION OF THE LARYNX WITH THE EPIGLOTTIS.

This hitherto-unattempted feat of surgery was performed, as we learn from the *British Medical Journal* (Jan. 31), on the 31st Dec. 1873 by Prof. Billroth on a patient suffering from cancerous growths in the larynx. These growths had been repeatedly removed by Dr. Störk with the aid of the laryngoscope. These growths however extended so far into the interior of the larynx that their removal through the oral cavity became impossible. With a view to preserve the right vocal cord however imperfect, Drs. Störk and Billroth at first simply opened the larynx in front, and, removing the cancerous growths, applied a solution of the perchloride of iron to the inner surface. The operation was well-borne by the patient and the result was promising for some time. But new growths again invaded the substance of the organ, and about the end of December the patient was threatened with symptoms of asphyxia. Extirpation of the whole organ was decided upon, as it could not produce any additional physiological defect, and might lead to a radical cure, if the disease was centred only in the larynx. Accordingly, Prof. Billroth removed the larynx with the Epiglottis on the 31st Dec. The operation, formidable as it was, was well-borne. Respiration was carried on through a tube inserted into the trachea. Constitutional disturbance was slight and the wound had nearly healed by the 9th January. On the 24th the patient was reported to be able to eat and drink, and sit up for several hours daily.

THE BURDWAN FEVER.

(*Continued from p.* 46.)

2.—SYMPTOMS.

I have already observed that the fever prevailing in Burdwan does not differ materially from what used to ravage the district towards the end of the rainy season. It is of malarious origin and varies in type according to the severity of the poison and the constitution of the recipient. The characteristic feature of malarious diseases is their periodicity and tendency to recurrence. The longer intervals of health indicate a system less influenced by malaria, whilst a stronger dose of the same will induce in the same individual less and less of intermission, till the fever will merge into the remittent or continued type. Thus one would pass through the phases of quartan, tertian, quotidian, double quotidian, remittent, or continued, and the danger to life will increase as the climax is reached. All the varieties are changeable from one to the other, and do not in themselves form distinct species. Thus in the first year of the epidemic, cases of the continued and remittent types are observed, which are mentioned by the native Kavirajs as *Jwar bikár*. As the severity declines it becomes quotidian and ultimately quartan. The last type of fever prevails exclusively in the district of Burdwan, and shows that the poison is wearing itself out. The new cases are observed only in August and September, when the subsidence of water from the face of the earth gives fresh impetus to the generation of malaria.

The mode of attack of the villages one after another is very peculiar. In the first year the villages adjacent to an epidemic-stricken locality will show at the close of the rains more of ordinary fever cases and greater mortality than usual. But this, being virtually nothing more than what they are accustomed to in some fever season, will not create any alarm or grave apprehension. With the approach of winter, the fever disappears and the people congratulate themselves on the change. The old cases recover and continue their ordinary avocations. The second rainy season brings with it a recurrence of the disease, which this time becomes more general. Nearly every member of every household is affected, and the village is panic-stricken. Deaths from acute fever run high, and those that survive are marked for constant recurrence of the same.

With the prolonged suffering, complications begin to appear, such as enlarged spleen, liver, anasarca, &c. Late in winter a respite is obtained which continues till a third rainy season brings on with it fresh suffering. The mortality this year is heavier, not from acute disease, but amongst chronic patients who succumb under slight depressing causes. The suffering being general, there is seldom any person spared in a family to attend to the sick. Instead of improving in summer, the fever continues, as well as the mortality, which takes place from dysentery, anasarca and cancrum oris. In the fourth year, death from acute fever becomes still less, but the chronic cases swell the list of mortality. Slight abatement in its severity is again observed in summer, when the fever, formerly quotidian, takes on a quartan type. In the fifth year the virulence is much spent. Though the people suffer, they are yet able to attend to their duties and earn their livelihood. Fever with them becomes a natural phenomenon. Unless it be a very strong attack, it never deters them from eating, drinking, and bathing as usual. In this condition some recover their flesh enough to show an apparently healthy appearance. Medication is no longer resorted to, and to all intents and purposes, there is restoration of health, peace and tranquillity. A great many yet suffer from quartan fever, but as I have already said, their system gets so accustomed to the suffering that they do not attach much importance to this state. In the majority a permanently enlarged indurated spleen is left, but it becomes a part and parcel of the necessary constituents of their body. Most of them would remain without fever for months or years and yet their spleens remain undiminished in size. The slightest cause however upsets their balance of health, and every now and then cases occur, which are hurled on from bad to worse and ultimately terminate fatally. When this state of things continues, which is more marked in the sixth year, we pronounce a village as restored or recovered. I have not yet seen a village perfectly regain its former salubrity, though some of those, that were less affected and less populous and possessed better sanitary arrangements, have approached a condition very near to it. Some villages bordering the line of the epidemic went only through two stages of illness and have now rallied.

Whilst the village affected goes through its stages of desolation, other new ones are absorbed in the vortex of disaster. The encroachment is slow and goes on extending one year after another till in 12 years' time the epidemic has travelled, before our very eyes, from east to south-west, an extent of territory no less than 70 to 80 miles. I have not met with any village in my jurisdiction which has been completely indemnified from its ravages. But there are certainly some tracts of country to be found here and there, where the visitation has been less disastrous. Their topographical condition and the habits of their inhabitants will form another chapter of our discourse. The extension has taken place more towards west than south, and more towards south than north, whilst be it remarked that the drainage level of the district runs from north-west to south-east. Often a river-course has deterred its onward progress for years, nay at places the boundary line of health and disease has been abruptly defined.

This slow but sure travelling of the disease and its invasion of one village after another, have given rise to the suggestion of the epidemic being not of malarious origin, but consisting of some such element that bears the stamp of contagion. Dr. Verchere in Burdwan and Dr. Greene in Serampore sounded the alarm note respectively of the fevers being typhus and typhoid in nature. These epidemics, they assert, leave the system so enfeebled that it becomes an easy prey to malaria which is endemic to the soil, and from the constant recurrence of which the people suffer off and on. A great many other writers incline to the view of communicability, though they do not differentiate the types.

Dr. Elliot inclines to the belief that the fever in Burdwan possessed decided power of communicability, and the Deputy Inspector-General Dr. Sutherland subscribes to the same opinion. According to him, it appears 'that a fever of a highly infectious character may originate and spread from intensified malarious influences, aided probably by bad ventilation and the emanations from the bodies of the sick. That the fever, described by Dr. Elliot, did assume an infectious character, I do not doubt, and that the excessive mortality in certain localities depended on this, is I think rendered highly probable, but it is only in certain favourable conditions that such a result would occur, and if the ordinary endemic fever of the place exists at the same time, the fact of there being an intercurrent wave of infectious fever may be easily overlooked. In the long period that has elapsed since the first appearance of epidemic fever in Jessore in 1824 up to the present date, it is very probable that fevers of very different characters prevailed.' That the disease broke out in all its virulence as contagious, and in two years changed its peculiar characteristics and assumed a milder form, cannot be easily credited, since what is now observed is nothing more than the continuation of the first outbreak which has softened down in its intensity. The apparent show of contagiousness, which has misled some observers, arose probably from the fact of the simultaneous appearance of disease amongst the members of the same family. Thus in July, I was the first person attacked in my house, then my eldest girl, who used to sleep in an adjoining room, next my wife, and last of all the servants. But it should be borne in mind that the week, which saw all of us laid up in bed one after another, was the one when universal disturbance was manifest in the district. In Burdwan itself other officers, such as the Magistrate and the District Engineer, suffered also and sickened the same week, though we had no intercommunication. The simultaneous appearance of disease amongst members of the same family or of different ones proves nothing more than general perversion of the air. The period in which the power of communicability can be satisfactorily traced is the one when the fever is on the decline and when the suffering, instead of becoming universal, is confined to a few individuals. It is not uncommon then to find sporadic cases of remittent or continued fevers of the worst type, and I can confidently say that out of numerous instances of that nature brought to my notice and some of them ending fatally, I have never seen a second case of the same type in the same house and seldom two in one village. At the very height of an epidemic when the cause is powerfully operative, every one is subject to it alike, and of course those are more liable who undergo bodily and mental strain by waiting on their sick relations. Under such circumstances, it is expected that case after case would take place in the same house without any contagion to account for it. If it had been limited to the members of one house whilst the others enjoyed absolute freedom, as occurs in an outbreak of cholera, the theory of contagion would have been undeniable. But in the present epidemic the suffering is acknowledged to have been universal and no family was spared, the priority of attack being determined by the predisposition which exhaustion and fatigue would lead to.

It has been observed that towards the end of winter and just when the hot summer sets in, a few fresh cases of remittent fever come under treatment. These take place mostly in boys under 15 years of age and take a dangerous turn. They are very obstinate in their course and run on for 10 or 15 days continuously, bringing on great prostration and emaciation. They are essentially in their type analogous to the virulent fever observed at the commencement of the rains, only they are confined to a few individuals and have no tendency to spread. These are the cases that I have mentioned previously as sporadic and from which I have deduced my conviction of the non-contagious character of the fever. Their per centage of mortality is great, though they generally mark for their victims those that had shaken off their previous illness and had apparently recovered. In the ensuing season from the month of March such cases have begun to show themselves, and those, that have hitherto been brought to my notice, have presented well marked brain complications from the very outset, which have ended fatally in some instances. The cause of this sudden manifestation has not been satisfactorily made out. The villagers informed me that such fevers in the summer season were uncommon before the epidemic, at least they were not recognised facts. This fever has been described by many as heat-fever, appearing with the change of season, and attributable to the direct effect of solar heat on the human system. The explanation seems to me not to afford sufficient solution of the fact of the preponderating number of boys suffering as compared with adults, who from the very nature of their occupation are more exposed to this cause than the former. If this secondary period of exacerbation were solely due to the influence of heat, it is unaccountable why the same agency did not operate in previous years before the district fell a prey to malaria? One fact, however, should be mentioned as a coincident circumstance, that from the middle of February to the middle of March, the first ploughing of the land is commenced. After the last harvest is reaped, the water from the fields subsides and the ground is dried up. It becomes in a manner settled, charged as it is with remnants of manure and stumps of rice stalks. The first turning up of the soil liberates a fresh dose of malaria, which, however, is not of sufficient strength to prostrate adults who possess greater powers of resistance, yet potent enough for the constitution of boys, especially those who had shaken off its influence. I offer this simply as a suggestion as to how far the two circumstances can be associated in the relation of cause and effect, though I confess sufficient evidence is yet wanting to admit them as proven facts.

The first attack always proves to be of the continued or remittent type, and is looked upon as dangerous. After the prodromata of general languor, lassitude, costiveness, wandering pains, want of appetite, the fever is ushered in by a chill followed by the hot stage of several hours' duration; generally there is complete intermission in the first day, but next morning the attack recurs. The symptoms are now more exaggerated, the face becomes flushed, the thirst is intense, the tongue is thinly furred, and there is headache attended with bilious vomiting and sometimes delirium. The patient feels an intense pain in the limbs as if bruised all over. The hot stage may or may not be followed by sweating, but there is no more that feeling of ease after the lapse of a few hours. The fever remits and yet he feels thirsty, drowsy and heavy in the head. The temperature reaches its maximum and ranges between 100° to 104° with a fluctuation of 2° to 3° between the morning and the evening indications. This state continues for 3 or 4 days when the prostration becomes greater, the tongue is more thickly coated, and delirium supervenes, which takes place more often at night and is of a quiet nature. The bowels remain costive, and active purgation is very badly tolerated. On the 5th or 6th day copious sweating brings the case to a termination. If the strength be not properly supported throughout the illness, the diaphoresis may end in collapse. The skin gets cooled down to 96° or 97°, and if advantage be not taken of this period of quietude to anticipate the coming storm with good doses of quinine, we may expect in the evening a recurrence of the symptoms, and the fever tending to become intermittent, instead of continued, in character. Thus, along with the decline or severity of the disease, we have the different phases of intermittent, remittent or continued fevers in one and the same individual, the different types being well marked both during the period of invasion and subsidence. This merging of one type of fever into another distinctly observed at its commencement and end, distinguishes it from typhus which runs its equable course and ends in complete and sudden defervescence. Thus an ordinary case takes 7 or 8 days before convalescence is established, but when once under the influence of malarious fever, the slightest cause, as exposure, fatigue or irregularity of diet, will bring on what is ordinarily called a 'relapse.' This relapse, unlike the relapses of true relapsing fever, does not observe any regularity as to time. It is quotidian, tertian, quartan, weekly, fortnightly, or monthly, according to the capacity of the individual to withstand its effects.

Exceptional instances occur, which are too puzzling for diagnosis, in which instead of the convalescesce being established in 8 or 9 days, the attack lasts longer and ultimately takes on a typhoid type. These are generally the result of neglect in seeking for early treatment, or of some peculiar idiosyncracy in the individual. The cases continue from 2 to 3 weeks, during which a high temperature is kept up with occasional variation, the tongue, at first thickly coated and moist, gets dry on the surface, and ultimately brown sordes collect on the teeth and lips, and petechial eruptions make their appearance. As a rule, the bowels remain costive, and it is exceptional to find looseness of bowels as a complication. When it does exist the cases are more obstinate and take longer time to recover. Drastic, hydrogogue cathartics at this period are to be carefully avoided, as too often I have traced the sudden turn of disease from bad to worse to a dose of jalap or salt. Whilst on the one hand listlessness, drowsiness, prostration, delirium, dryness of tongue, and sordes make the case resemble an attack of typhus, on the other hand analogy is equally strong with typhoid when along with the existence of the preceding symptoms we have a prolonged duration of illness, spots, and diarrhœa. It is no wonder that practitioners, on an imperfect observation of a few cases, should jump at a conclusion, which is so tantalizing, and startle the world with a discovery hitherto unrecognised by the profession. The differential symptoms of both will be treated of under the heading of diagnosis. The looseness, which I have spoken of as an exceptional complication, may be either of the nature of a dysentery or of a bilious flux. As a rule the spleen and the liver both become enlarged and tender.

Death takes place in the second week of illness from exhaustion, or it may not take place till the 3rd or 4th week when it is generally due to complications of the lungs. When it takes place in the first week it is due to cerebral complication, or to a concentrated dose of the poison acting on an enfeebled constitution and bringing on sudden collapse during the sweating stage.

Death from cerebral complication is more common in villages newly affected, where after a suffering of 4 to 5 days' duration, it is not uncommon to find people struck down as it were with convulsons, coma, and death. In the majority of instances, symptoms of headache, heaviness in the head, drowsiness and delirium precede, but in others the attack is sudden. It takes place in the remittent and continued types and even in the intermittent type during the height of the paroxysm. In children, it is a common and formidable complication as one or two such fits end in death. In adults, life may be prolonged to two, three or more days in this state of unconciousness, but recovery is seldom observed. The patient remains on his back with the limbs stretched, rigid or flexed, pupils slightly contracted, pulse over 100 and temperature varying from 100° to 103°. Insensibility from brain complications, and that from exhaustion, can be distinguished by the following characters. The first occurs early in the course of the disease, the second later on. In the former, the insensibility is deep, the patient lies motionless, and the limbs are rigid. The temperature is invariably over 100°. In the latter, there is good deal of restlessness, patients can be roused by loud calls, and temperature is below 100°. Between the insensibility of typhus and that of malarious fever there is this distinction: That the latter is immediately preceded by head symptoms, whilst in typhus, the headache as a rule, disappears, and then coma supervenes (Murchison). Whilst in typhus death begins at the heart, in malaria it begins at the brain. The early feature in typhus is failure of heart's action, and prostration, the early feature in malaria is failure of nervous functions and delirium.

The second mode of death is by exhaustion. To call a fever sthenic or asthenic is as much objectionable as to call ulcerative action healthy or unhealthy. *Fever is always debilitating in its nature, more or less.* It is specially so in constitutions previously under-fed and kept starving at a time when the vitality is being consumed away by increased pyrexia. This is exactly the condition with most of the poor people in Burdwan, whose time-honoured prejudices will not allow them to have recourse to nourishment as long as the active stage of fever lasts; except one or two sugar bubbles and a mouthful of water to wash them down, the patient is kept literally starving with the view of consuming away the vitiated humours. Want of nourishment brings on more prostration, and want of sufficient fluid in the system causes retention of effete nitrogenous products. These combined may manifest themselves in typhoid symptoms, which have often been mistaken for typhus fever. The rapidity with which these patients recover under simple nourishment is sometimes marvellous, and I have often had the satisfaction of restoring to life, if I may be allowed the expression, patients who were apparently too far gone into the typhoid state, by enforced administration of nourishment. Death from exhaustion seldom takes place within the first week of illness, unless, as I have previously remarked, an officious practitioner brings it about by the administration of an active purge after the 5th or 6th day.

DIAGNOSIS.

Acute malarious fevers closely resemble in their symptoms typhus, typhoid and relapsing fevers, but they have certain main features by which alone they can be distinguished. Without going the length of denying altogether the existence of typhus and typhoid in India, well-marked cases of which have lately come under observation, I give an emphatic denial to the statement that the present epidemic has the characteristics of the one or the other. From typhus it is distinguished by the absence of contagiousness, by the eruption and by peculiarity of temperature. Dr. Murchison states that typhus is contagious in 92 per cent. The unmistakable instances of contagion he enumerates bear no parallel in the history of the present epidemic. The cases, from which the advocates of the typhus theory draw their conclusion, were treated in the police hospital of Burdwan, which consists of a hall no bigger than 4 × 30 in which more than 20 beds were crammed in. Indeed, the beds touched each other. The worst case was placed in the centre bed of this hall, surrounded by cases of fever of various degrees of intensity, mostly intermittent.

The ventilation of the room is defective owing to the shutting in of the doors, windows and arches with mats on three sides to keep away the draught. Yet the disease was not communicated to a single patient or attendant. The seizure of the several members of the same family at a time when the fever is raging all over the district, gives a fallacious indication of contagiousness. The eruption in typhus, according to the same authority, passes through three stages: 1st, pale, dirty pink or florid; 2nd, reddish brown or rusty; 3rd, livid and petechial. In the first it is slightly elevated and disappears on pressure. In the second it disappears in part and is no longer elevated. In the third it is not affected by pressure. Generally it appears on the 4th day and lasts from seven to ten days. In uncomplicated cases, as a rule, it continues till death or recovery. He lays some importance to the fact that simple petechiæ do not constitute typhus, as they are observed in the course of many other diseases both febrile and non-febrile, but a *rubeoloid eruption which often becomes converted into petechiæ on the 8th or 10th day.* These are observed in 93.2 per cent. The spots seen in the course of malarious fever appear on the side of the chest or arm on or about the middle of 2nd week. They are present in some exceptional instances, and not until grave typhoid symptoms have supervened. It may be stated at a rough estimate that they are absent in 93 per cent. of instances. They are distinct and defined, about the size of a pin's head, and petechial, unpreceded by the stage of rubeoloid effervescence. It may be argued that in dark complexions the primary stage is not well marked. I have often watched the surface of the body for rash of any sort whatever in open day-light, but have never been able to discover either motling or elevation, though, when we had an outbreak of measles along with it in the district, the eruptions even in dark skin were unmistakable. The peculiarities of temperature in malarious and in typhus fevers will at once clench the diagnosis. In typhus, it attains its maximum from the fourth to the seventh day, and it is 105°. There is little change for several days afterwards. A slight remission is observed between the seventh and the tenth day, but on or about the 14th day it *rapidly* subsides to its normal standard. After the final fall, it seldom rises above 100°. In malaria, there is complete intermission on the first day. On the 2nd or 3rd day it reaches its maximum and continues with slight variation between the morning and evening indications for four or five days (in bad cases for a longer period without any definite rule) till it begins *gradually* to decline. From continued or remittent it takes on an intermittent character, and goes on for days unless checked by a sharp dose of quinine. The rise and fall for some days after defervescence show the peculiar termination of malarious remittent into intermittent, a termination which, if it had been typhus, would weaken the theory of specific diseases. The sequalæ from which the majority suffer will further disabuse the mind of the typhus element which was asserted to have been the initiator of the epidemic.

From typhoid fever the diagnosis is easy enough. The peculiarity of temperature in malaria, when contrasted with that of typhoid, will give a valuable clue to diagnosis. Thus, if in the 2nd or 3rd day, the temperature rises so high as 102° or 103° we can at once make up our mind that the case we have to deal with is not enteric fever. Besides, looseness of bowels, a constant element in the latter, is an exceptional attendant in malarious fever. It is a complication only of the bilious remittents, in which, however, its early appearance as a bilious flux, and the bilious vomiting and hepatic tenderness, mark the distinguishing features. Remittent fevers complicated with dysentery have often been mistaken for typhoid, and more than once cases were reported to me as such by native doctors when personal inquiry revealed the true nature of the disease. In these instances, the history of the patient should be carefully sifted. In a case of acute hæmorrhagic dysentery it will require all the tact of the practitioner to differentiate the character. The gripe, the tenesmus, the constant desire to go to stool, and the nature of the stool itself, together with the history of the fever having been simultaneous with so-called bloody evacuation will settle the doubtful point. Cases of malaria do now and then occur in which the profuse bloody discharge from the bowels simulates what takes place in the insidious forms of typhoid, but the previous cachectic constitution in the former, the enlarged spleen, scrofulous gums and discharge of blood from other mucous passages are conditions wanting in the latter disease. Add to these the morbid condition of Peyer's patches in typhoid or enteric fever, and we complete the list of symptoms that would serve as diagnostic between the malarious and typhoid fevers

The analogy between malarious and relapsing fever is so distant and far fetched that only a very powerful imagination could convert this distant analogy into an identity. I have already expressed my belief that the Burdwan fever is not contagious. Nor do the relapses observe any regularity as to the time of their appearance. The similarity consists merely in the fever being continuous for a few days and then recurring for an indefinite number of times with the least exciting cause. The diagnosis, which one forms at a distance of 70 miles without having a single case under one's direct observation, savors more of fiction than of logical distinction, and therefore does not deserve to be entertained or discussed upon.

In the next number we will proceed to describe some of the complications which are the accompaniments of the fever, and from one or other of which the majority of people in the district of Burdwan are suffering.

REVIEW.

Complete Repertory to the Homœopathic Materia Medica. Diseases of the Eyes. 2nd Edition. Revised, re-arranged, and very much enlarged. By E. W. Berridge, M. D., &c., &c. Alfred Heath, 114, Ebury St., London. 1873.

The use of the Repertory to the Materia Medica in the treatment of disease is almost peculiar to Homœopathy, and has arisen out of a necessity that is almost absolute. The Materia Medica of the New differs in its main and essential features from the Materia Medica of the Old School. The basis of the one is the proved physiological or pure actions of drugs in health; the basis of the other is the reputed or empirical therapeutic actions of drugs in disease. The one is a record of pharmacodynamics; the other would be a record, and a valuable one, of pharmaco-therapeutics, if the reputed therapeutic actions were all genuine and referrible after some law to the pharmacodynamic actions of drugs, but being based upon their "presumed qualities which are either imaginary or false," is only a tissue of a few unmeaning epithets, such as tonic, sedative, stimulant, anodyne, &c. In the best and most recent works on Materia Medica of the Old School we have, indeed, a record of the physiological actions of drugs, but they are the most meagre imaginable, taken chiefly from cases of poisoning. Pathogenesis, or the whole diseased state produced in health by drugs, is the very foundation of the homœopathic system of therapeutics, and consequently must constitute the very essence of the homœopathic Materia Medica. Hence the symptomatology of the Homœopathic Materia Medica is of necessity much more voluminous than the symptomatology of the Allopathic Materia Medica, so voluminous indeed that it is not possible for the most capacious and retentive memory to hold even an infinitesimal portion of that symptomatology. And he who is acquainted with the practice of Homœopathy knows well how even apparently the most trivial symptoms acquire importance in the process of differentiation of remedies. Whether ever we shall succeed in refering all symptoms to their true anatomical sources, whether, in fact, we shall ever have a perfect organopathy which Dr. Sharp so enthusiastically looks after and is so zealously working for, we cannot say; but that the time is yet far distant[*] it is not difficult to see. And so long as we are not favored with this realization of this ideal perfection of our Materia Medica, we must be content to work with the imperfect and defective one already in our possession. But to work with this Materia Medica we require some guide which will be an efficient and ready help to the practitioner in enabling him to feel and find his way in the mazes of its interminable symptomatology. And this guide can be no other than a detailed, classified, and well-arranged Index of the symptoms referred to the drugs producing them, in one word, a good Repertory.

The Great Hahnemann himself, who, having proved most of the drugs upon his own person, might be supposed to have had all their symptoms in his memory, which was singularly capacious, would not trust to that treacherous guide in the solemn and responsible duty of prescribing for the ailments of suffering humanity. On this head we have the testimony of those who knew him most intimately. "Hahneman records with precision," wrote Peschier of Geneva,[*] "the totality of symptoms or entire group of sufferings of the patient, inclusive of all constitutional ailments, previously manifested in his own person, or of any hereditary taints characteristic of his progenitors. On the completion of his record, the symptoms of the disease are most carefully arranged to correspond with the indications of the drug he deems most appropriate to the case; *but in reaching this conclusion he neither confides in his memory, nor relies solely upon his long experience, but has constantly before him the* MATERIA MEDICA and RUECKERT'S REPERTORY, from whence he culls every remedy the emergency of the disease demands." Nothing demonstrates more convincingly the importance to the practitioner of homœopathy of a Repertory to the Materia Medica than this habit here recorded of the illustrious Master. It is presumption of the worst description to say, as some have the hardihood to say, that they can carry in their small heads, what Hahnemann could not in his monstrously large head.

The importance of the Repertory is, then, admitted; but it must be admitted also that to be really useful, to be a safe and ready guide to the practitioner, the Repertory must be a good one. Now what are the conditions of a good repertory? Dr.

Berridge thus answers the question : "A PERFECT REPERTORY," says he, "should contain a reference to *every* symptom of the Materia Medica under every *rubric* where it can possibly be looked for." We must here observe that it is not enough to give a mere reference to every symptom. If a symptom is made to appear, as it ought, under every possible rubric, it should be made to appear in its entirety (as has been done in the Repertories of the Hahnemann Publishing Society), and never dismembered, as has been done by Dr. Berridge, whereby he has lowered the value of his otherwise excellent Repertory. Dr. Berridge illustrates the use of his Repertory by the following cases from his own practice, which, as our readers will see, illustrate also to some extent the arrangement adopted in the Repertory.

CASE I.—Aug. 9, 1871. At 2 P. M., a child put its finger into its mother's left eye, scratching the upper part of eyeball ; smarting in the eye followed, with heat, redness, and hot lachrymation ; cannot open the eye from pain. Cold water applications relieve the pains and watering ; the light of day increases the watering.

Diagnosis of the Remedy.

(As the symptoms arose from a mechanical cause, I did not consider the locality (*left* eye) as a characteristic of the case).

Page 290. **Relief from Cold.—Heat.** al-o. amm-cl. (thu).
" **Lachrymation.** al-o.
" **Smarting.** al-o. n-x.(?)*

Page 293. **Relief from Washing.—Heat.** al-o. amm-cl. asr. k-na. (thu).
" **Lacrymation.** al-o. asr. mg-ca.
" **Smarting.** al-o. na-ca.

Page 175. **Worse from Natural Light.—Lachrymation.** al-o. bry. dig. dl-s. dt. eug. grp. k-bicra. kre. lyc. mg-cl. qu-sa. s-x. (str-i). vr-s. zn.

Thus *Alumina* alone corresponds to all these symptoms, and it will be found to have also Redness of eyes (page 16), Difficult opening of Eyelids (page 47) and Hot Lachrymation (page 24). Accordingly at 7 P. M., the symptoms having lasted five hours, I gave a single dose of *Alumina* C. M. (Fincke). In *fifteen minutes* all the symptoms were gone, except a little feeling of stiffness.

CASE II.—November 6th. Three weeks ago, when blowing her nose, she felt as if something broke in the right eye, which watered much. Since then, at times, when blowing nose, has had a feeling as if a tight skin came half way down over right eye, preventing the sight of that eye ; removed by rubbing. After it has gone, feeling as if something were pricking the eye ; eye waters. On the last two occasions this sensation came on without blowing the nose.

Diagnosis of the Remedy.

Page 209. **By Blowing Nose. Sight Impaired.** k-o.
" **Pellicle.** k-o.

As *Kali Oxidum* (*Causticum*) was the only medicine which possessed these most characteristic symptoms, and, moreover, corresponded to the remaining symptoms as a reference to the Repertory will show, I gave one dose of *Causticum* 6 m. (Jenichen).

Dec. 11. Reports that the symptoms ceased at once and did not return.

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* In the Repertory itself under ' Relief from washing.— Smarting," we have al-o. ox-x. instead of al-o. n-x.—*Ed.*

We are sorry we have not space enough to enter into the merits and demerits of Dr. Berridge's Repertory as compared with the other Repertories already published. We must refer the reader to the work itself, where he will see from the Preface the minute explanations entered into by the author about the arrangement of the rubrics, and from the body of the work how far he has succeeded in carrying out his scheme. Though not perfect, as no human work can be, and though not what we could wish and what could have been accomplished, if a different plan had been followed, we can nevertheless recommend Dr. Berridge's Repertory to every homœopathic practitioner who is anxious to treat his patients according to the strict principles of homœopathy, selecting his remedies from the totality of symptoms. Over the Hahnemann Publishing Society's Repertory, Dr. Berridge's has at least this advantage, that whereas the former, having been published so far back as 1859, has become much out of date, the latter brings us down to the latest proved drugs.

We cannot but regret, however, that Dr. Berridge should have unnecessarily increased the size of his work by introducing remedies, more than two-thirds of the whole number, of which we have no provings properly so called, at least no reliable provings, and which one could not get even if one were minded to prescribe. We regret further that he should have discarded the old abbreviations of the remedies for symbols of his own coining, which are unnecesary in most cases, and so queer and uncouth in general that it is neither easy nor pleasant to learn them and retain them in the memory. In fact it takes more time to find out what a particular symbol means than to find out a particular symptom under a particular rubric.

We hope Dr. Berridge would, in a future edition, increase the usefulness of his Repertory by returning to the old abbreviations, and by reducing the size of the book by expunging the doubtful remedies. We believe a further reduction in the size is possible by putting the Sides (Right and Left), and the Aggravations and Ameliorations, in opposite columns. This latter plan, while it will reduce the number of pages, will enable us at one glance not only to see the contrast between remedies, as affecting the right and left sides, and causing aggravations and ameliorations under particular circumstances, but also to see what remedies affect equally both sides of the body, and what are indifferent as to bringing about both aggravation and amelioration under the same circumstances.

CLINICAL RECORD.

A Case of Cholera. Recovery.

UNDER CARE OF AN L. M. S.

The patient, a child, aged 4, was not seen until he had been suffering for nearly 5 hours from an attack of severe cholera, unpreceded by any premonitory diarrhœa. The case then (10½ a. m., Sunday the 15th March) presented all the appearances of a combination of the spasmodic and gastro-enteric varieties. As the case was not seen in its first stage, I cannot tell to which variety it then belonged. From a knowledge of the success that uniformly had attended me in several cases (no less than 22) even in the advanced stages, during the previous year, both in his family and in the neighbourhood, the father of the patient, a wealthy man, would not listen to the importunities of friends and relations who were anxious to call in other medical practitioners of high repute, and prefered to leave the case alone till I could be had, which was 3 hours after notice was first sent to me. When I saw the case for the first time, it presented the following symptoms :—Rice-water stools with whitish flocks, coming out in a stream, every ¼ hour ; violent retching and vomiting of a watery fluid similar to the stools, urine suppressed ; very restless ; eyes sunk with bluish circles around them ; face, lips and nose bluish and cold, covered with clammy perspiration ; tongue cold and coated brown ; thirst violent ; rumbling in the intestines ; voice hoarse ; cramps in the hands, feet, and legs ; extremities cold and covered with clammy sweats ; fingers and toes corrugated and bluish ; body covered with clammy sweats ; pulse absent at the wrist.

11 a. m. Ordered 6 doses of *Camphor* to be followed by *Verat.* 3. and *Ars.* 3 every ½ hour until next visit.

3 p. m. No perspiration, trunk and extremities rather warm ; much better than before ; cramps still present. Ordered *Cup.* 6, 2 doses.

6 p. m. Much better ; cramps still present. Ordered *Secale* 6, 2 doses.

9 p. m. Reaction has taken place ; no vomiting, no stool, no urine ; pulse distinctly felt ; no cramps ; body warm ; abdomen flatulent. Ordered *Carbo. v.* 6 every ½ hour, 3 doses.

12 p. m. One yellow stool ; decidedly better. Ordered *Canth.* 6 every 3 hours.

Monday the 16th, 6½ a. m. No urine. *Terebinth.* 6, one dose.

12 a. m. No urine ; eyes congested slightly. *Bell.* 6.

6 p. m. Had 3 doses of *Bell.* Is drowsy, one yellow stool. I suspect worms, and ordered *Cina* 6, one dose to be followed by *China* 3, 2 doses; hot fomentation to the loins.

12 p. m. Brought up 2 round worms. *Cina* 6 one dose and *Bell.* 3 2 doses.

Tuesday the 17th, 6 a. m. Stupor great; breathing laborious; passed one round worm with the stool. *Canth* 30, 2 doses and dry cupping to the loins.

12 a. m. Eyes upturned. *Cic. v.* 6, 2 doses.

6 p. m. Deep coma, convulsions, breathing difficult, abdomen rather tympanitic, no urine at all. *Op* 3, every ½ hour.

9 p. m. Urine 8 oz.; decidedly better; no convulsion; breathing natural; a little drowsy. No medicine.

Wednesday the 18th, 6½ a. m. Diarrhœa. *Verat* 3.

6 p. m. Better; *China* 30, one dose.

Friday the 20th, 6 a. m. Ulceration of the mouth and gums. *Nitric ac.* 6, twice daily.

Sunday the 22nd. Left cheek swollen, tense, brawny. *Ars* 30 twice daily.

Sunday, the 29th. Cured.

Remarks.

This was an ordinary, but a very instructive case of cholera. It shows how cramps are sometimes persistent in spite of improvement in other symptoms, and how they did not subside in this case even after the exhibition of *Camphor*, *Veratrum*, *Arsenicum*, and even *Cuprum*, till *Secale* was given, when with the alleviation of the cramps, the improvement in the other symptoms was thorough. It shows how the existence of worms complicates even hopeful cases, and stands in the way of recovery which might have been otherwise rapid. Whether the existence of worms had any thing to do with the keeping up of the suppression of urine in this case it is not possible to say, but that their expulsion did not encourage the secretion is clear. We further learn from the case how the orthodox *Cantharis*, *Terebinthina*, and *Belladonna* failed, and how *Opium* undoubtedly, as it unexpectedly succeeded, in bringing about the secretion. We learn also from the case how even without the previous exhibition of mercury there is a tendency in cholera cases, no doubt from the deterioration of the blood caused by the disease, to ulcerations of the mouth, and how on this very account we ought to be careful in drugging cholera patients with heroic doses of calomel as recommended by some members of the Old School.

Gleanings from Contemporary Literature.

SOME OFFICIAL CORRESPONDENCE RELATING TO THE HOOGHLY FEVER.

From JAMES A. GREENE, M.D., *Civil Medical Officer, Serampore, to the Magistrate of Hooghly,—(No.* 511, *dated Serampore, the* 1*st November* 1873*).*

SIR.—I have the honor to acknowledge the receipt of your letter No. 372 of the 27th ultimo, and in reply beg to submit the following report:—

2. I regret I have not been able to visit that portion of the district near the Damooda; an epidemic of dengue, followed by a serious outbreak of fever in the station, prevented my doing so last year; the duty of inspecting the epidemic dispensaries devolved on Dr. Zorab; the Kistonogor dispensary having been closed early this year, I had no occasion to visit that portion of the district, but I have been to Tarkessur, Bundeepore, Hurripal, Chundeetollah, and very recently to Massohat, a village within 2 miles of Sheeakallah, and about 9½ miles from Serampore. It was my intention to have gone into Sheeakalla, but I was prevented by the lateness of the day and the complete failure of the gharry ponies to go any further. As I went along through Bora and other villages I made inquiries and found them quite free from fever. Mussohat was also quite free from fever and the people there had not heard of its prevalence to any extent at Sheeakallah.

3. Although I have not visited the locality situated near the Damooda personally, yet I have gained a certain knowledge of it from the descriptions given in the *Hindoo Patriot* by some one seemingly well acquainted with these parts. Extracts from the above paper, bearing on the drainage question, are regularly published in the *Indian Medical Gazette;* from a careful study of the above extracts, and a map of the district, and from observations made during my visits to some of those feverstricken places, I have come to the conclusion that the epidemic fever is due to interference with the natural drainage of the infected localities. The fever poison is thus generated in the soil, acts on subjects predisposed to the disease by want of proper food, and the disease is spread from place to place by human intercourse. In my inspection report of the Bundeepore dispensary last month, I drew your special attention to a khal which runs parallel to the Tarkessur road, past the village of Bundeepore; a bund which is used as a footpath has been thrown right across this khal and connects the village with the Tarkessur road; some years ago, the villagers stated, this was a running stream, and no doubt drained the village, and Bundeepore has suffered much from epidemic fever since the silting up of this khal.

4. I am not up in the history of this fever from its commencement to date, as I never see the *Gazette* in which the reports, &c., of its progress are published from time to time; I shall, therefore, confine my own personal experience during the past three years at Serampore. On looking at a map of the Hooghly District it will be seen that the old Benares road intersects the district, meeting the Chundeetollah and Sheeakallah roads at Chundeetollah; from thence it goes across to Doarhatta, where it meets the Hurripal road; from Doarhatta it goes on to the Damoodah River, and from the other bank of the Damoodah it is continued to Jehanabad, &c. The Chundeetollah road goes from Serampore to the Dancoonee Jullah and meets the above road (old Benares) at Chundeetollah; next the Sheeakallah

road goes from Serampore and meets the Benares road above Seeakhala intersecting the Danconee Jullah also ; a branch road from the Sheeakallah road meets the Hurripal road at Singoor. The Hurripal road commencing at Buddibatty, passes through Jolaghatta, Singoor, Hurripal and goes on to Doarhatta, where it meets the old Benares road ; from Doarhatta a branch road goes to the Thanna of Kistonogor ; the Tarkessur road branches off from the Hurripal road at Nalley-Kool and passes by Bundeepore.

5. Having described the roads which intersect this subdivision, I beg you will observe that this is also the fever tract in which the fever has moved during the past four years. Commencing at Jehanabad where the fever raged so severely, and has, I believe, nearly depopulated some places, it next raged at Doarhatta ; from Doarhatta it reached Kistonogor in 1870, Hurripal and Singoor in 1871-72, and Bundeepore, and last year from Buddibatty, through Chatra, to Serampore 1872-73.* It prevailed right along the river bank even to Howrah. The fever is confined to these roads, and this year we find it breaking out simultaneously at Singoor and Sheeakallah, two places between which there is direct communication ; when the fever raged so severely at Jehanabad the people that could naturally escaped along the roads, infesting other places, as they went along. Many of the Jehanabad people are to be found in Serampore, and they are regular attendants at the dispensary, suffering to this day from the sequelæ of the fever. As far as I have been able to ascertain, the Chundeetollah, Sheeakallah, branch roads to Singoor, Tarkessur and Kistonogor are all new roads, made during Mr. Ryland's incumbency, and there was no fever at Kistonogor, Bundeepore, Chundeetollah, Sheeakallah until after these roads were made.

6. In my last annual report of the Serampore hospital, I described the epidemic of fever which occurred in the town and suburbs of Serampore last year. I then stated that many of the cases I had seen presented typhoid symptoms, having during the past year been thus brought face to face with the epidemic, and, after having seen and treated at least 2,000 cases, I have come to the conclusion that the fever we have to deal with is typhoid, complicated, no doubt, with malaria, but the first outburst in any place is typhoid, and this is the formidable fever which kills or leaves its victims so prostrated that they suffer thereafter for months and years from relapses of malarious fever ending in enlargement of the spleen, liver, &c. Last year I saw many cases of typhoid and many fatal cases amongst them ; this year in Chatra and Rishra, so recently as last month, I saw two genuine cases of typhus or black fever with the characteristic black or livid spots on the body ; one recovered and one died ; within the past fortnight I have seen two fatal cases of typhoid in Chatra. I have also questioned the native doctors in charge of epidemic dispensaries about the character of the fever, and they, being unacquainted with the pathognomonic symptoms of typhoid, describe them as low remittents lasting 20 or 30 days : having seen two cases of typhus this year leads me to infer there was some truth in the report which prevailed last year about the presence of black fever in Mahesh and Chatra last year. If the type of the fever raging in these parts is proved to be typhoid then the whole mystery of its spread through human intercourse is quite explicable.

7. As regards the stoppage of the main drain at Rishra, I beg to remind you that when the epidemic fever raged in that place last year in December, you came down personally to inspect the place, and I accompanied you. I then drew your attention to the main drain or outlet of the

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* It closed on Serampore in two directions, one from Buddibatty *via* the Hurripal road ; 2nd from Ooturparrah *via* the old Benares road.

village which had silted up for some years. To this cause the inhabitants attributed the unhealthiness of the village. I have taken some trouble to enquire into the history of the drain in question, and found that Rishra, like other places, situated along the river bank, drained inland into the Dancoonee Jullah; that from this Bheel beyond the Railway, this large drain originated; it thus passed through the centre of the village, receiving in its course many minor drains; it then crossed the grand trunk road, passing down to the river through the compound above the Rishra Jute Mills, formerly the properly of Warren Hastings; the inhabitants say that during high tides the river went along this channel and flushed all the minor drains; after the formation of the railway bank, this channel was blocked and gradually silted up; and within the past six months the present owner of the compound has filled it (the drain) from the river to the grand trunk road. The inhabitants of Rishra are unanimous in the opinion, that the unhealthiness of this village is due entirely to the closure of this and the other drains; they date the commencement of the unhealthiness from the formation of the railway embankment. This unhealthiness has increased, year by year, until at at last it culminated in the epidemic of the past year, which caused a fearful mortality; at least 600 people fell victims before December. I append copy of a letter from the Secretary of the Rishra Club sent me in December last, in which he states that at least 400 people had died. I also enquired about the mortality amongst the mill hands employed at the Rishra Jutè Mills, and was told that the Company, at the beginning of last year, had in their employ 500 up-country coolies, and at the end of the year only 50 remained, the majority had died, and those that could went home; two of the Company's European assistants, who landed in May last year, died of typhoid fever in July, and August, respectively. I attribute this great mortality to the closure of the drain in question, and partly to the bad sanitary condition of the village itself. I have repeatedly brought the drainage question of the entire municipality before the Municipal Commissioners, and have pointed out that the whole of the drains require resurveying and remodelling. I have stated that the insufficient, choked up and bad drainage is a source of disease, but my representations as yet have had no effect. In support of my views about defective drainage being a source of severe outbreaks of fever. I beg to refer you to an extract (copied into the *Indian Medical Gazette* of the 1st October 1873, page 279) from a report on Hygiene in the Army Medical Department Report for 1871, the heading is "Marsh Fever produced by obstruction to the sub-soil drainage." The extract is too lengthy for me to copy, but you will be able to procure the *Indian Medical Gazette* from the Hooghly charitable hospital.

8. In going along the Sheeakallah road to Massohat I observed the crops particularly, and found those sown on high lands stunted and completely withered, about two-thirds of the crop looked yellow and would not bear; here and there, where the land was low and some water remained, patches of green were observed, bearing paddy.

From JAMES A. GREENE, M.D., *Civil Medical Officer, Serampore, to the Deputy Surgeon-General, Presidency Circle* (*No.* 587, *dated Serampore, the* 19*th December* 1873.)

Sir,—I have the honor to acknowledge receipt of your memo. No. 4372 of the 1st instant, with its annexure, and, as requested, beg to submit the following report on the typhoid fever in this district.

2. I based my opinion that the fever we have to deal with is typhoid in its nature, from having seen an epidemic of fever last year, in the station, town and suburbs of Serampore. I gave a description of this fever in my last annual report of the Serampore Charitable Dispensary. I cannot do better than give an extract from my annual report, describing the symp-

toms. "The symptoms varied. Two of the worst cases I saw presented all the symptoms of yellow fever in an aggravated form; both died on the 3rd and 4th day of the disease; these cases presented the following symptoms:—Strong fever, jaundiced skin, conjunctivæ deep yellow, pulse full, quick and soft, intense headache, incessant thirst, urine scanty and suppressed on the third day, colour of strong tea, bowels active, tongue dry, rough and brown, sordes on the teeth, violent delirium, incessant vomiting of bilious matter, in one case of grumous blood, coma, muttering delirium and death. The next to be described were cases of aggravated remittent fever, presenting many of the symptoms of typhoid fever; these attacks came on in most cases suddenly; in some premonitory symptoms presented themselves, such a malaise, loss of appetite, disinclination to work, &c. In other cases patient would suffer from all the symptoms of fever for a day, then the febrile paroxysm would abate, and the patient and his friends would congratulate themselves that the fever was gone, in six or eight hours, however to their disappointment the fever would return with great intensity. In severe cases the following symptoms were noted:—Great heat of body, temperature ranging from 101° to 105·2°, heat of skin pungent, no remission in most cases, a burning sensation of the whole body caused great restlessness and was bitterly complained of, intense headache with intolerance of light, thirst insatiable, tongue as dry and rough, as coarse sand paper, covered with a thick brown fur on the top, the tip and edges of a peculiar livid red colour, bowels generally costive, tympanites with borborygmi in most cases, in some tenderness on pressure in right iliac fossa. Pulse was peculiar, ranging from 120 to 140, soft, full and compressible, with a peculiar thrill which is felt when a wave of fluid is not sufficient to fill a vessel. This last peculiarity of the pulse indicated great danger, *viz.*, sudden failure of the heart's action, rapid collapse and death, as happened in some cases; in some old people who were attacked, the pulse was intermittent from the first, and these cases ended fatally; delirium was present in most cases, and want of sleep much complained of; in some cases the delirium was violent, the patient trying to jump out of bed, &c.; these symptoms continued abated for two or three days, when, in some cases the extremities would feel cool; this was often mistaken for a remission, when in fact it was invariably the precursor of dangerous collapse which would come on rapidly; the extremities would cool rapidly until they felt like ice, the body remaining hot, the thermometer at this stage indicating 100°, sometimes more; the pulse would however dwindle away, difficulty of breathing set in with great restlessness, patient tossing and tumbling about, begging for more air and at last death would close the scene in about four or five hours from the setting in of the unfavorable symptoms. These were no doubt cases of death from embolism, although I had no opportunity of verifying this by making any *post-mortem* examination. This fever terminated fatally in two other methods, *viz.*, sudden diarrhœa and rapid collapse; generally violent purging would set in, followed by rapid collapse and death in two or three hours; the other method of fatal termination was by congestion of the brain; in these cases the head would be found intensely hot, conjunctivæ red, violent delirium, ending in muttering delirium, picking of the bed clothes, the third day catching at imaginary objects, coma and death; in some of the severe cases the fever was prolonged for ten days or a fortnight or more: in these the prostration of strength was excessive; patients were reduced to skeletons, recovering gradually in two or three months, subject however to relapse,—relapses seem to be the rule in this fever; the fever in relapsed cases does not last long, yet the patient gets weaker, and weaker, and ultimately enlargement of the spleen and liver, anæmia and dropsy set in.

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THE MATERIA MEDICA.

35.—MENISPERMUM COCCULUS.

Nat. Ord. Menispermaceæ.

Synonymes. Anamirta Cocculus; Cocculus Indicus.

Habitat: "Mountain forests of Ceylon, Malabar, Travancore, the Concans, and Orissa, extending to khassia and Assam."—*Pharmacopœia of India.*

Off. Part. "The fruit dried; rather larger than a full sized pea, somewhat kidney-shaped, blackish brown, wrinkled, containing a yellowish, oily, bitter, reniform seed, inclosed in a two-valved shell. The seed contains crystallizable principle, Picrotoxine, which is powerfully poisonous"—*Pharmacopœia of India.*

We take the following from Pereira's *Materia Medica,* 4th Ed., by Rees and Taylor:—

COMPOSITION.—Cocculus indicus was examined in 1811, by Boullay, and in 1834 by Pelletier and Couerbe. The results obtained by the last mentioned chemists were as follows:—

Analysis of the Nucleus.

1. Picrotoxine.
2. Resin.
3. Gum.
4. A fatty acid substance.
5. An odorous matter.
6. Malic acid.
7. Mucus.
8. Starch.
9. Lignin.
10. Waxy matter.
11. Inorganic substances (nitrate and sulphate of potass. and chloride of potassium), by incineration carbonates of potash, and of lime, manganese, and

Analysis of the Shell.

1. Menispermin.
2. Paramenispermin.
3. Yellow alkaline matter.
4. Hypopicrotoxic acid.
5. Wax.
6. Starch.
7. Chlorophylle.
8. Resinous matter.
9. Gum.
10. Fatty matter.
11. Inorganic substances (as those of the nucleus with the addition of copper).

1. Picrotoxine (*Picrotoxic Acid*).—At first it was supposed to be an alkaline substance, and was termed *picrotoxia.* It is a white, crystalline, intensely bitter substance, usually crystallising in needles, but sometimes in silky flexible filaments, transparent plates or granular crystals. It is soluble in 150 parts of water at 57°F.. in 25 parts of boiling water, in a third of its weight of alcohol, and in less than half its weight of ether. It is insoluble in the fixed and volatile oils, but is soluble in acetic acid. It does not combine with acids to form salts, but it forms combinations with alkalies. It seems, therefore, to be an acid, though a feeble one. It consists of $C^{12}H^{7}O^{5}$. The poisonous properties of the nucleus (seed) of cocculus indicus depend on picrotoxine. [According to Gregory, however, the formula is $C_{10} H_6 O_4$. He observes that some recent researches tend to show that picrotoxine is a vegetable base. In regard to its chemical characteristics it may be stated that it is readily dissolved by water which contains a small quantity of soda, and when to this solution a few drops of sulphate of copper are added and the liquid gently warmed, red oxide of copper is thrown down, as with grape sugar. Ether is a good solvent of picrotoxine, but it does not readily remove this principle from its solution in soda. Dr. Glover has experimented on the properties of this substance, and has published an account of his experiments in the Lancet. According to the analysis of Dr. Francis, it contains nitrogen, and it consists in 100 parts of carbon 60·26, hydrogen 5·70, nitrogen 1·30, oxygen 32.74—Ed.]

2. Menispermia (*Menispermina ; Menispermine*).—This is an opaque, white, crystalline substance, soluble in alcohol and ether, but insoluble in water. It fuses at 248°F., and at a higher temperature is decomposed, leaving an abundant charcoal. It dissolves in, and saturates acids ; and from these solutions alkalies precipitate it. Concentrated sulphuric acid has little action on it ; hot nitric acid converts it into a yellow resinous substance, and oxalic acid. It is composed, according to Gay-Lussac, of $C_{18} H_{12} NO_2$. It does not appear to have any marked action on the animal economy.

3. Paramenispermia (*Paramenispermina ; Paramenispermine*).—This is a crystalline solid, insoluble in water, scarcely soluble in ether, but dissolving readily in alcohol. It is fusible and volatile, and may be sublimed unchanged, It does not neutralise acids, and, therefore, differs in this respect from the preceding substance. Notwithstanding this, however, its composition is the same.

4. Hypopicrotoxic Acid.—This acid is an amorphous, brown solid, insoluble in water (cold or boiling), insoluble in ether, soluble in alkalies, and precipitable from its solution in them by the mineral acids. It is composed of, *carbon* 64·14, *hydrogen* 6·09, *oxygen* 29·77. This composition approximates to that of picrotoxine.

The *yellow alkaline matter* of the shell has been scarcely examined.

Boullay mentions a crystalline substance which he calls *menispermic acid ;* but its properties require further examination.

General Physiological Effects : Pereira, in noticing these effects, says that a solution of the aqueous extract of Cocculus Indicus

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(We have not received these Journals for some time past.)

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Books, &c., for review, to be sent, carriage paid, to the Editor direct.

is made to the examination of bodies *post-mortem*, but I am unable to understand the difficulty which appears, up to the present moment, to have stood in the way of the investigation of the Serampore and Burdwan fever by this most ordinary and demonstrative of all tests. Undoubtedly, some friendless persons and people of low caste must have been numbered among the hundreds who have died of these fevers. During two years, in which I was Civil Surgeon of the adjoining district of Howrah, I met with no unusual difficulty in making *post-mortem* examinations; and I apprehend that should any extraordinary bar exist in the Serampore district, an explanation of the necessity, clearly laid before one or two such enlightened and public-spirited zemindars as Babu Joykissen Mookerjea, of Ooturparrah, would, at once, lead to such a relaxation of prejudice as would enable us to employ the needful test.

The nature of the disease or diseases with which we have to deal being thus ascertained, our sanitary and therapeutic action will become defined with absolute and indisputable clearness.

diarrhœa) demonstrably of paludal origin and subject to the antidotal action of quinine in nearly all but the moribund cases, has been, almost daily, among the chief subjects of our clinical practice.

It is, however, clear that the diseases prevalent in the Burdwan, Hooghly, and Serampore districts may never have extended to Calcutta, and that none of those who have been attacked in these localities may have been able to reach this hospital.

It is noteworthy that the six patients, who have been treated for enteric fever in this hospital since May last, have been brought from the following localities :—

Entally.
Bhowanipore.
Puttuldanga.
Pathuriaghatta.
Burra Bazar.
Barrackpore.

So that they all appeared within range of sewer influence, and only one of them arose in a spot at all near the habitat of the so-called "epidemic" fever.

I need not urge that the recent existence of enteric fever in Calcutta indicates the necessity of deciding whether it is or has lately also been present in the Burdwan, Hooghly, and Serampore districts.

The well-known case of the Eclair has taught us that, when the victims of severe paludal fever are cooped up in narrow, ill-ventilated, sewage-polluted spaces, a truly contagious fever may be generated. The native villages of the Burdwan, Hooghly, and Serampore districts contain all the insanitary elements,—poverty, evil sewage, and overcrowding,—which elsewhere, generate true enteric fever. Dr. Greene has shown that cases somewhat resembling enteric fever occur in these districts, but such cases also occur in Calcutta, where these causative elements are nearly equally rife. Still, when thoroughly sifted, very few of the multitude of grave Calcutta fever cases turn out to be instances of true enteric fever. The true nature of many of the cases which occur in the Serampore district may be inferred from the fact mentioned by Dr. Greene that, when patients struggle through the first violence of the malady, they ultimately fall victims to debility, enlargement of the spleen and liver, anæmia, and dropsy. These are not the proper sequelæ of enteric or of relapsing fever, and they clearly point to a paludal cause. Hence, I submit, our first course is to ascertain, by at least some half dozen carefully performed *post-mortem* examinations in well-chosen cases, whether the disease is, in reality, true enteric fever or a typhus-like fever of paludal origin, complicated, in some cases, with diarrhœa, which symptom, I need scarcely say, is very common in the true marsh fevers of India, whenever, as in very cold weather, the state of the skin does not allow of free critical sweating.*

I am well aware that among strict Hindu communities, much objection by which they meant the typhus-like condition into which the subjects of various asthenic diseases in Bengal sink when treatment has been long neglected, or as the end approaches. In England, practitioners are still justified in applying the term "typhoid" to true enteric fever, although many have done better in dropping it, because that country does not, in the present day, afford many cases of paludal fever so malignant in type as to assume a typhus-like form. But, in India, as the task of diagnosing true enteric fever from paludal remittent of typhus-like character with diarrhœa is difficult to physicians of the greatest experience, it is absolutely necessary, to avoid dangerous error, that our nomenclature should be unmistakably precise.

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* Since I wrote this, a very characteristic case of this type of malarious fever has terminated fatally in my ward. A khansamah, of Toltolah, was admitted on the 4th instant, complaining that he had suffered from intermittent fever for about 15 days. Tongue moist and clean, temperature 105, splenic fulness, a little cough and bronchitic rales. On the next day, there was jaundice with constipation. On the day after that, pleuro-pneumonia of the right lung set n. Some might consider this a primary feature in the case, I recognised it as a secondary lesion ommon in the severe malarious fever of this cold weather. The daily evening temperature was 05 ; 103 ; 100 ; 102 ; 99 ; 101 ; 100, sordes on tongue and lips ; 98 m 99 e.; 101 ; 102 ; 102 ; 100 ; 101 ; rather constipated ; 98 morning, 100·8 evening ; 101 m., 100 e., tongue, lips and teeth dry, loose yellow stools : 102. m. and e., tongue moist and clean ; three stools of the consistence and appearance of thick dal, no gurgling in the iliac fossa ; 102 ; three stools ; 98 m., 100 e. ; 97·8 m., tongue moist and clean, three diarrhœal stools, 101 e., frequent diarrhœal stools, incoherence, death. Here the stools had very much the appearance of those in enteric fever ; but they did not contain blood or mucus. The character of the moderate head symptoms, the range of the temperature and the state of the tongue, except for a time, did not indicate enteric fever ; and yet I could not feel quite satisfied on this point until I had ascertained that the small intestine was perfectly healthy.

Let us, therefore, in future drop entirely the vague and confusing expression "typhoid fever" whenever we allude either to the enteric fever of Jenner (a disease which is now recognised as holding a distinct position in India) or to other fevers and states of typhus-like character.

My experience of typhus fever and enteric fever at Guy's hospital ranged over twelve years. I have carefully studied the paludal and enteric fever of Bengal for twenty-five years, and yet I am quite unable to determine whether the three cases which Dr. Greene "believes to be typical cases" of typhoid fever are instances of enteric fever or of aggravated paludal fever.

I would merely remark upon these cases that there was nothing demonstrative of true enteric fever in the range of temperature of either; that, in the second, there was no bowel complication whatever*: and that, in all, evidence regarding the condition of the intestinal follicles was absent. Further there was nothing in the symptoms described in the least irreconcilable with the supposition that they were the characters of marsh fever of great intensity.

The three patients may have been the subjects of "typhoid"—that is, true enteric fever, but Dr. Greene has not at all proved that they were. With regard to typhus-like fevers, as they occur in the Calcutta Medical College Hospital, my experience ranges from the year 1862. Unfortunately, as regards my fitness for the discussion of the point at issue, I was out of India between April 1872 and December last.

I have never been able to convince myself of the existence of true typhus in Bengal. On two occasions, several years ago, true enteric fever became rather prevalent in this hospital. In the first outbreak, seven or eight genuine cases came under my care; in the next, the cases were fewer, but perfectly clear. Intermediately, a clear case has occasionally presented itself. Hence we have been constantly upon the look out for true enteric fever for the last eight years, examining the skin, keeping records of the range of temperature, carefully inspecting the stools and investigating the state of the intestinal follicles in all fatal cases of a suspicious nature. On careful enquiry, I find that since May last, six cases of fever, believed to be of the true enteric type, have occurred in this hospital, one in May, three in June, one in August, and one in December.

In four of these cases, *post-mortem* examination revealed conditions of the small intestine indisputably characteristic of true enteric fever.

From the above data, it is clear that while, as I have said, true enteric fever has taken up a defined position among the diseases of Bengal, this malady has ever during the last eleven years become at all extremely prevalent in Calcutta, although typhus-like fever (often attended with

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* In the other two, the evidences of enteric complication were but slight. In the first, [illegible] once that the bowels were open and that there was tenderness on pressure in the [illegible] fossa, and that, on the day of death, there were two "watery, dark and offensive" [illegible]. In the third case there was "diarrhœa," not further described.

From Surgeon-Major NORMAN CHEVERS, M.D., *Principal, Calcutta Medical College, to* H. B. BUCKLE, ESQ., C.B., *Deputy Surgeon-General, Presidency Circle—(No. 749A, Medical College, 20th January 1874.)*

SIR,—In reply to your office memo. No. 5050 of the 10th instant, forwarding to me for report the documents marginally noted, I have the honor to submit, for the information of the Surgeon-General, that, while I have read Dr. Greene's report upon the fever now prevailing in the Hooghly and Serampore districts with much interest, the account which he gives appears to leave the most important question at issue—the nature of the fever—wholly undecided. In my humble opinion, it will be impossible to deal with this fever validly until we can ascertain precisely (1) whether it is a fever of paludal origin; or (2) true enteric fever. [As nothing in the great mass of printed detail that I have read on the subject leads me to suspect that this is true relapsing fever, a disease which I have never seen in Bengal, I do not entertain that question.]

(1.) As, if it be an intermittent or remittent congestive fever of the cold season aggravated into malignant intensity by concentration of marsh poison, uncleanliness, overcrowding, neglect of treatment, chill, and privation, we have, therapeutically speaking, a comparatively easy task in coping with it. Good hygiene, the free and steady use of quinine, proper feeding and clothing, the provision of hospitals and marsh drainage will check the evil as directly as water quenches fire—save that, as the intensity of some fires is so extreme that water is unable to extinguish them, the severity of some of our marsh fevers is so overwhelming that even the directly antidotal force of quinine fails to quell them.

(2.) While, if the disease be true enteric fever, no remedial measures will succeed in cutting short its attacks, quinine will have but little power; segregation of the sick and careful nursing and feeding in hospital will be nearly all that medical aid can effect, while our main reliance will be placed upon engineering labor devoted to the improvement of sewer-drainage in the infected villages.

Dr. Greene's intelligent reports afford strong evidence of the necessity of at once deciding, beyond all pretext for uncertainty, whether this is paludal or enteric fever.

His best efforts to control the evil are rendered invalid by our ignorance of the true nature of the morbid force with which we have to cope.

Having paid considerable attention to the recent discussion upon "typhoid fever" in India, it has appeared clear that much confusion and vain dispute would be avoided if we strictly confined ourselves to the designations "paludal fever" and "enteric fever," never again using the word "typhoid." Every practitioner is aware that, in Bengal, cases of cholera and remittent fever frequently take on a condition so "typhoid" or typhus-like in its character that no physician, seeing a case for the first time, could immediately determine, by the symptoms alone, whether it was one of true typhus or (when, as frequently happens in the congestive, paludal, remittent of the cold season, there is bowel complication) one of the true enteric fever as described by Jenner.

It is only by carefully watching the progress of such a case of typhus-like fever, and especially by discovering that its course can be cut short by cinchonism, which it never is in true enteric fever, or by finding, on *post-mortem* examination, that the follicles of the small intestine are perfectly free from the characteristic lesion, that we are enabled to dismiss from our minds the impression that we may have been dealing with enteric fever.

Long before Jenner drew a clear distinction between typhus or typhoid or enteric fever (diseases which were well nigh as clearly separated and defined by Richard Bright and his pupils as "typhus," and "typhus with bowel complication") medical men in India spoke of the "typhoid state," *(b).* Abdool, a Mahomedan, 19 years old, was admitted into the Charitable Hospital on the 30th October 1873, with continued fever of eight days' duration; previous to this for four days he attended as an out-patient, but finding himself so weak and prostrated he begged to be admitted as an in-door patient. On admission, temperature 101·2°; pulse 120; sordes on lips and teeth; tongue covered with a thick white fur, fissured edges, and tip red; is drowsy; bowels open.

November 3rd.—No change; temperature 101·2°; pulse 120, soft.

6th.—No improvement; temperature 101·3°; pulse 120, soft; tongue covered with a creamy fur; bowels not open; drowsy.

7th.—Temperature 103·1°; pulse 120, soft; respiration 36; drowsy.

8th.—Lying asleep; sordes on lips; tongue moist, clean; temperature 100, soft; 9 bowels open; respiration 34; says he is hungry.

9th.—Same drowsy state; tongue clean; sordes on lips; temperature 102°; pulse 120; respiration 34.

10th.—Temperature 101·2°; pulse 110; respiration 34; bowels open.

11th.—Temperature 100·4°; pulse 90, soft; bowels open; tongue covered with a most white fur; sordes on lips.

13th.—Temperature 100·4°; pulse 90, soft, compressible; bowels not open; tongue covered with a white fur, moist; respiration 28; sordes on lips and teeth.

14th.—No change; temperature 100·4°; pulse 90, soft; respiration 24; tongue white.

15th.—Temperature 100·4°; pulse 90, soft.

16th.—Temperature 98·4° pulse 90, soft; respiration 28 tongue clean, moist; bowels open.

17th.—Temperature 99·3° pulse 84, soft; respiration 28; tongue clean, moist; bowels open.

18th.—Temperature 97·4° pulse 70, soft; respiration 24; tongue clean, moist.

19th.—Temperature 97°; pulse 65, ; respiration 18 tongue clean; bowels open; appetite good, asked for more food.

20th.—Convalescent, but very weak.

30th.—Discharged.

(c). Kalli, a Hindoo girl, aged 12, was seized with fever about the 24th or 25th August last, which continued without any abatement or remission until I saw her on the 4th October. Her condition on that morning was as follows:—Temperature 102°; pulse 100, thready; total emaciation; lips, gums and tongue a mass of sordes; purple spots in body of various sizes, largest about the size of a rupee; subsultus, low muttering delirium, picking of the bed-clothes, diarrhœa; has a large bed sore on each hip; has been treated with chlorate of potash, ammonia, cinchona, port wine, animal broths, blisters to neck; has also had bronchitis. I ordered her a mixture of dilute sulphuric acid, acetic acid, sulphuric ether, brandy and water every two hours, alternately; with this milk as much as she could be induced to take; under this treatment she quite recovered.

5. I regret I had no time to take full notes of the numerous cases I attended last year; they were cases which occurred amongst rich and poor alike, and in private practice full and complete notes could not be taken, especially amongst natives, for various reasons. *Post-mortems* in fatal cases were never allowed, owing to caste prejudices. To touch the body of a Hindoo after death ever so slightly is believed to send the soul of the deceased to perdition; in many cases the victims were hurried away to the banks of the Ganges on the least sign of unfavorable symptoms, even when there were still hopes of recovery.

3. The above symptoms were compiled from pencil notes taken during the height of an epidemic which during the month of September numbered 1,200 sufferers. My practice extended from Connagur to Buddibatty, a distance of seven miles, and, as before stated in my report, "in each house whole families were prostrated at the same time;" from 12 to 18 or more members of joint families would be laid up at the same time, though not all suffering from the same type of fever. Thus, out of 18 cases, three would present the symptoms of typhoid, four or five of remittent, five or six of intermittent, and the remainder of common continued fever. The existence of fever of different types in the same family at the same period is nothing new, as is proved by the following remarks by that eminent Physician Dr. Stokes of Dublin, who said :—"A good deal had been said of the distinction between typhus and typhoid fevers. He should be sorry that that society adopted those hard and fast lines of distinction between different forms of essential disease. Many of the authors, who contended for these hard and fast lines of distinction, had not observed or practised in this country (Ireland). Their experience had been drawn from the London or Edinburgh hospitals, and they had not practised much or at all in Ireland. If they did, they would have had an opportunity which did not occur in English hospitals, of seeing an entire family in the wards of an hospital at the same time, both the parents and five or six of the children; and in that group of cases, where one cause most probably produced the disease, they would meet with every possible variety of fever,—well marked petechial typhus, non-petechial fever, pythogenic or enteric fever, simple fever and rheumatic fever." (Braithwaite's Retrospect of Medicine, Vol. 65, page 22). These remarks are applicable to the epidemic of fever even as it now exists, where side by side with typhoid are found cases of remittent, intermittent and common continued fevers.

4. I now give the history of three cases which I believe to be typical cases.

(a.) On 1st September last, I was called to see the daughter of an oil manufacturer in Chatra. She was said to be suffering from "Jor Bekar." I found a young girl, aged 12 years, quite prostrated from a continued fever of 17 days' duration, the fever continued day and night without any abatement; temperature 102°; pulse 100, soft; sordes on lips and gums; tongue red at edges, coated with a thick brown fur along the middle, slight subsultus; great thirst; no sleep; delirium at night.

2nd September.—Same condition; temperature 103·2°; pulse 102; no sleep last night; bowels open; tenderness on pressure in right iliac fossa.

3rd.—Much the same; temperature 103·3°; pulse 120, soft.

4th.—Temperature 102°; pulse 120, weak; subsultus increased; no sleep; no appetite.

5th.—Temperature 103°; pulse 120; delirium increased.

6th.—No change; temperature 103°; pulse 110; no sleep; very restless and delirious; sordes on lips and gums; tongue coated.

7th.—Worse; temperature 102°; pulse 100.

8th.—Temperature 103°; pulse 100; delirium increased; attempts to get out of bed; subsultus increased.

9th.—Much urine; temperature 102°; pulse 110; delirium increased; swallows medicine and food with difficulty; the mother informed me that large purple spots had appeared on the body since the previous afternoon. On taking her to the light (the room being dark) I noticed many livid spots on the body each about the size of a rupee.

10th.—Temperature 101°: pulse 100, weak, compressible; is very violent, trying to jump out of bed; low muttering delirium; picking at bed clothes; subsultus; bowels moved twice, motions said to be watery, dark and offensive; will not swallow food or medicine.

11th.—Died.

killed a haricot plant in 24 hours; and that it has been found to be poisonous to dogs, goats, cows, crocodiles, birds, and insectss, causing nausea and vomiting, staggering, trembling, tetanic convulsions, and insensibility. It is very poisonous to fish, roach dying rapidly, but barbel with difficulty.

Old School Uses: Never empolyed internally. Only used as an external application, chiefly in the form of ointment (1 to 5 of lard), but sometimes as powder, to destroy pediculi. Has been very rarely employed as an external application in porrigo.

Concordances.

Moral and intellectual faculties.—Acon. *bell. calc.* hell. hyosc. IGNAT. *lyc.* n-vom. op. phosph. *ph-ac.* PULS. rhus. sep. sil. stram. sulph. veratr.

Seat of the diseases.—Acon. alum. anac. *arn. ars.* aur. BELL. BRY. CALC. canth. caps. *carb-veg.* caust. *cham.* CHIN. *con.* cupr. graph. hep. *hyosc.* IGNAT. KALI. LYC. MERC. natr. *natr-mur.* nitr-ac. N-VOM. *op.* petr. *phosph-* plumb. PULS., RHUS. *sabad.* sep. SIL. spig. *stann. staph.* stram. SULPH. *sulph-ac. thuj.* VERATR. zinc.

Morbid states and sensations.—*Acon.* alum. anac. arn. ars. asaf. asar. BELL. *bry.* CALC. camph. *caust. cham.* chel. *chin.* cic. *con.* ferr. graph. hell. *hyosc.* IGNAT. ipec. *kali.* lach. laur. LYC. *merc.* mezer. mosch. *natr-mur.* nitr-ac. N-VOM. oleand op. petr. *phosph.* ph-ac. *plat.* plumb. PULS. RHUS. ruta. sec-corn. SEP. SIL. spig. spong. *stann.* staph. stram. SULPH. sulph-ac. thuj. VERATR. zinc.

Glands.—*Ars.* BELL. bry. *calc. con.* merc. *phosph.* sulph.

Bones.—Chin. cycl. hep. *puls. ruta.* sabin. sil. staph.

Skin.—Acon. arn. *ars.* bar. *bell.* BRY. calc. CAUST. con. dulc. hep. kali. lach. LYC. MERC. natr-mur. nitr-ac. *phosph.* ph-ac. PULS. RHUS. sabad. scill. SEP. SIL. spong. SULPH. thuj.

Sleep and dreams.—Bell. con. n-vom. phosph. puls. sep. sil.

Pyrosis.—*Acon.* arn. ARS. BELL. *bry.* calc. carb-veg. caust. *cham.* chin. creos. hep. ipec. *kali. lyc.* MERC. N-VOM. op. *phosph.* PULS. RHUS. sec-corn. *sep. sil.* spig. stann. *staph. sulph. veratr.*

Time.—*Amm. ant-crud.* asaf. asar. BELL. colc. ignat. laur. LYC. *nitr. nitr-ac.* PULS. ran-bulb. sil. *thuj.* valer. *zinc.*

Exacerbations.—Amm. arn. *ars.* aur. *bell.* BRY. calc. *camph.* cann. caps. carb-an. *carb-veg.* caust. CHAM. chel. chin. cic. coff. colch. CON. dulc. *graph.* HEP. IGNAT. ipec. *kali.* lach. led. LYC. mang. merc. *natr-mur.* n-mosch. N-VOM. petr. *phosph. puls.* rhodod. RHUS. sabad. scill. SELEN. *sep.* SIL. spig. staph. *stront.* sulph.

Concordances in general.—Acon. amm. arn. *ars.* BELL. *bry. calc.* camph. carb-veg. caust. *cham.* chin. *con.* graph. hep. hyosc. IGNAT. ipec. *kali.* lach. LYC. *merc.* natr-mur. nitr-ac. N-VOM. op. petr. PHOSPH. ph-ac. PULS. RHUS. ruta. sabad. selen. *sep.* SIL. spig. stann. staph. stram. *sulph.* sulph-ac. thuj. veratr. zinc.

Antidotes.—*Camph.* cham. cupr. ignat. *n-vom.*—NOC. coff.

Hahnemann's Preface.

(Pulverize the seed and extract the tincture at a moderate temperature, by adding twenty parts of alcohol.)

THIS plant, which had been heretofore used merely for the purpose of destroying a few hurtful animals and stupefying fishes, in order to facilitate their being caught with the hands, had never been employed as a remedial agent previous to the provings which I instituted with that drug upon the healthy body. This drug is indispensable in many forms of lentescent nervous fevers, in certain abdominal spasms and spasmodic pains of other parts, disposing the mind to sadness, especially in females, in many cases of paralysis and certain moral affections.

Camphor is its chief antidote. In chronic diseases, this drug acts many days.

Pathogenetic Symptoms.

Mind :—

. Discouragement.
. His thoughts are exclusively directed to one disagreeable object; she is absorbed in her own thoughts, and sees nothing around her.
..He is absorbed in the saddest thoughts, and offences which were committed against him affect the very inmost of his heart.
. She is absorbed in reveries.
5. Time passes too quickly for him, and several hours appear to him so short as if they were but one.
. He is continually absorbed in sad thoughts, as if he had suffered an insult.
. He cares for nothing, nothing gives him pleasure.
. Weeping.
. Great dissatisfaction with himself.
10. He is very serious, afterwards he breaks out in lamentations.
. He is serious, and not very apprehensive about his own health, but very anxious about the indisposition of others.
. She is slow, fritters away her time, achieves nothing, her pupils being contracted (after 12 h.).
. Restless eagerness to do something.
. Anxiety.
15. In the morning he feels an anxiety about a little injury, as if it were incurable.
. Anxiety, as if she had committed a great crime.
. Great anxiety, as if he had committed an evil deed (after 29 h.).
. Anguish about the heart, anguish of death (immediately.)
. Palpitation of the heart.
20. Sudden violent anguish.
. Despairing mood.
. Hypochondria, especially in the afternoon.
. Excessive sensitiveness (after 24 h.).
. A slight noise caused all his limbs to start.
25. He starts at every unexpected little occurrence, noise, etc.
. He is easily offended.
. He cannot bear being interrupted, by talking, noise, etc.
. He is irritated by every little trifle.

. Every thing untoward vexes him; in a few hours he becomes cheerful and jesting.

30. She gets easily angry, and is easily offended (after 24 h.).

. Excessive disposition to feel vexed and to be offended (after 1 h.).

. She feels vexed at the least trifle, unto crying, the pupils becoming contracted; loss of appetite after weeping.

. He is highly offended and aggrieved by the slightest omissions and untruths of others.

. Cheerful, contented; he becomes witty and jesting (after 6 h.). (Partially a curative effect.)

35. Cheerfulness and contentment (curative effect).

. Irresistible disposition to warble a song, and sing; a sort of monomania.

Sensorium :—

. Vertigo as from intoxication, and stupid feeling in the forehead, as if he had a plank before it.

. Vertigo as from intoxication (when sitting) (after 1¾ h.).

. Disposition to vertigo (8 d.).

40. Vertigo for six hours.

. When raising himself in the bed, he is attacked with vertigo, as if every thing turned round, and inclination to vomit, obliging him to lie down again.

. Headache with inclination to vomit, as if he had been taking an emetic.

. Stupid feeling in the head.

. Stupid feeling in the head, with cold sweat on the forehead and hands, and repugnance to food or drinks.

45. He forgets easily what he had been thinking of a moment ago.

. Stupid and obtuse feeling of the head, increased by reading, obliging him to read a sentence several times before he understood it.

. Heaviness in the head.

. Sensation as if something heavy were lying upon his head, but without any pain.

. Thinking fatigues his head very much.

50. In the morning the head feels affected, as if one had been intoxicated the evening before.

. Cloudiness of the head, mostly increased by eating or drinking.

. (Vertigo with nausea and falling down without consciousness.)

. (Apoplexy, after excessive depletions.)

Head :—

. The head is painful, as if tied all round.

55. Headache, as if the brain were constricted.

. Headache in the temples, as if the head were between two screws.

. (Painful concussion in the brain when walking, when moving the head or when talking.)

. Headache, constrictive, burning, tearing, digging-up and boring.

. Violent pressure through the whole head, mostly in the forehead (forenoon), increasing unto loss of sense by reading or meditating (after 60 h.).

60. Aching pain in the forehead.

. Aching pain in the vertex (after 10 h.).

. Dull compression in the right half of the forehead.

. Aching, as if the brain were being compressed (after 5 h.).

. Sensation in the right temple, as if a blunt body were slowly pressed into the brain.

65. Pressing into the left temple.

. Violent pressing in the whole head, especially the forehead, from above downwards, increased when walking (after 6½ h.).

. Dull, wave-like pressing together in the left half of the forehead, tearing, throbbing headache in the forehead in the evening (from seven till nine o'clock) (after 38 h.).

. Frequent attacks of headache in a small place of the left frontal eminence, the pain lasting but a few minutes and being first a fierce, throbbing-lancinating pain, after which a tingling is experienced in the right frontal eminence, and then the whole symptom disappears.

. Fine stinging in the temples.

70. Severe stitch in the head above the right eye (after 12 h.).

. Several stitches in the right side of the brain (after 24 h.).

. Intermittent, boring prickings in the right side of the forehead.

. Fine prickings in the temple (after 6 h.).

. Headache, as if the eyes were being torn out.

75. Cramp-like pain in the left temporal muscle. (after 1½ h.).

. Headache, as if the eyes were being forcibly closed.

. Convulsive trembling of the head.

. Sensation of shuddering on the left side of the occiput, as if the hairs would stand on end.

Eyes :—

. Dull pressure upon the margin of the orbits (immediately).

80. Pressure in both eyes, as if dust had got in (after 7 h.).

. Aching pain in the eyes, with inability to open the eyelids, in the night (after 5 h.).

. Stitches in the eyes from within outwards (after 24 h.).

. (In the morning, swelling of one eye and one half of the nose, after having suffered with a violent headache during the night.)

. Dryness of the eyelids.

85. Dimsightedness.

. Sensation as if flies and black spots were hovering before the eyes, as if amaurosis would come on.

. She sees a black figure before her eyes, walking in front of her to and fro; when she turned, the figure turned likewise; nevertheless she saw every thing in a full light.

. Contraction of the pupils (after 5 h.).

. Blue margins around the eyes.

Ears :—

90. (Heat in the outer and inner right ear, early in the morning when in bed.)

. His ears feel alternately closed and deaf.

. Noise in the ears, as when one applies a shell to the ears.

. Noise, as that of the rushing water, with hard hearing (after 1 h.).

. The right ear feels closed up, as if he were rather deaf.

Nose :—

95. Swelling of the right half of the nose.

Face :—

. Sensation of pressure in the left zygoma, more stupefying than painful.

. Cramp in the region of the zygoma, in the masseter muscles (after 2 h.).

. Cramp-like pain in the masseter muscles, increased by opening the jaws (after 3 h.).

. Stitches in the external parts of the cheek, and in the muscles thereof.

100. Flushes of heat of the cheeks, without thirst (after 27 h.).

. Redness of the cheeks and heat in the face, without thirst, in a room entirely cold.

. Pustule beneath the right, outer corner of the mouth, with a red areola, experiencing a tensive pain when touched (after 24 h.).

. Swelling of the parotid gland.

Jaws and Teeth :—

. Swelling and hardness of the submaxillary glands, and nodosites in the forearm, painful when moving the hand along them.

105. Tearing-digging-up pain in the lower jaw.

. Biting sensation in the upper and lower molar teeth, as when a person eats a quantity of sea-salt; this becomes an agreeable sensation when biting the teeth together.

. The anterior teeth feel as if raised out of their sockets, and so heavy as if they would fall out.

. The carious tooth seems to have become elongated; it vacillates; the gums are swollen (after 12 h.).

. The hollow tooth is painful only when eating soft food, as if it were quite loose; it is not painful when biting the teeth together, between the meals.

110. (The gums are more sensitive and feel sore.)

Mouth :—

. (When talking, she experiences a contractive sensation in the mouth, and has to talk more slowly.)

. Roughness of the tongue, in the morning.

. Dryness of the mouth, in the night, without thirst.

. Dryness of the tongue, with a yellowish-white coating, without thirst (after ¼ h.).

115. Feeling of dryness in the mouth, with foam-like saliva and violent thirst.

. Collection of water in his mouth, without inclination to vomit (after $1\frac{1}{2}$ h.).

. Sensation as if water were accumulating in his mouth for a long time, without inclination to vomit.

. When stretching the tongue far out of his mouth, the back part feels bruised.

Pharynx and Œsophagus :—

. Dryness and roughness in the pharynx and œsophagus, especially perceptible during deglutition, without thirst (after 2 h.).

120. Scraping sensation in the throat, going off during deglutition.

. Great sensitiveness in the throat; the food which she swallows, appears acrid to her, as if too much peppered and spiced.

. Dryness in the back and upper part of the throat, and as if these parts, together with the tongue, were rough.

. Dryness of the œsophagus.

. Dryness of the throat, with a feeling of heat in the œsophagus and stomach (after 2 h.).

125. Burning in the velum pendulum palati.

. Burning in the œsophagus, extending up to the velum pendulum palati in the evening, accompanied by shuddering about the head.

. Pain in the upper part of the œsophagus, with a sensation of swelling about the root of the tongue, painful during deglutition.

. Aching pain in the tonsils, worse when swallowing saliva than when swallowing food.

. A sort of choking constriction in the upper part of the œsophagus, oppressing the breathing and inducing cough at the same time (after 1 h.).

130. A sort of paralysis of the œsophagus, preventing deglutition.

Taste and Appetite :—

. Taste in the mouth as if he had been fasting a long time.

. Metallic taste on the root of the tongue.

. Copper taste in the mouth.

. Metallic taste in the mouth, with loss of appetite.

135. Sourish taste in the mouth, after a meal.

. When coughing she has a sour taste in the mouth.

. Tobacco tastes bitter while smoking.

. Slimy taste in the mouth; but the food has a natural taste.

. Food tastes as if it were unprepared, or without salt.

140. Sensation in the mouth, as if smelling from the mouth (after. 6 h.).

. Bitter taste on the root of the tongue.

. No appetite for breakfast; she feels a fullness high up.

. Excessive repugnance to food, excited even by the smell of food, accompanied by hunger.

. Feeling of hunger in the pit of the stomach, little diminished by eating, almost the whole body.

145. Great thirst at every hour of the day, but especially during a meal.

. Aversion to food and drink.

. Want of appetite, food has no taste.

. Aversion to sour food, bread tastes sour (after 3 h.).

Gastric Symptoms:—

. Frequent, empty eructations (after 3½ h.).

150. Bitter eructations (after ¼ h.).

. Bitter eructations (immediately).

. Acrid scraping eructations, especially in the evening.

. Empty eructations, leaving a bitter taste in the mouth and throat (after 24 h.).

. Eructations tasting of the ingesta (after 18 h.).

155. Putird eructations in the forenoon.

. Rising of musky, spoiled air (after 8 h.).

. Motion in the stomach as if eructations would come on, causing pain in the stomach (after ¼ h.).

. Pain in the pit of the stomach, at every eructation, as if one had received a blow in that part.

. A short, stitching pain in the pit of the stomach, during an eructation.

160. Pressure against the inner wall of the chest during an eructation.

. Motions as if eructations would set in, followed by imperfect, unsuccessful eructations, terminating in hiccough, which lasted an hour (after 3 h.).

. Hiccough (immediately). Hiccough (after 10 minutes).

. Disposition to hiccough.

. Nausea, as when eating too much.

165. Nausea, (when smoking tobacco, to which he was used,) very nearly exciting vomiting (after 4 h.).

. (Paroxysms of nausea, with tendency to faint.)

. Inclination to vomit.

. She feels an inclination to vomit when eating.

. Nausea after drinking, in the afternoon; it appears chiefly to be in the mouth.

170. Frequent inclination to vomit (after several hours.).

. Excessive nausea and inclination to vomit, when riding in a carriage.

. Early in the morning, when in bed, she is scarcely able to raise herself, owing to sick feeling and inclination to vomit (after 48 h.).

. When becoming cold, or when catching cold, an inclination to vomit comes on, exciting a copious accumulation of saliva.

. Inclination to vomit, accompanied by, and related to headache, and pain in the intestines, as if bruised (after ½ h.).

175. (Vomiting towards midnight with suffocative fits, he vomits food and mucus, with bitter and sour taste in the throat.)

Stomach:—

. Sensation in the stomach as of a worm moving about in that organ.

. Sensation in the stomach as if one had been for a long time without food, until the hunger was gone.

. Pain beneath the stomach, immediately after dinner.

. Gurgling sensation (below) in the præcordial region.
180. Pecking and gnawing sensation below the præcordial region.
. Pressure in the stomach after a meal.
. Aching pain in the stomach, præcordial region and hypochondria, a few hours after a meal or in the night when in bed.
. Pressure in the pit of the stomach, arresting the breathing (after 1 h.).
. Clawing (crampy sensation) and tension in the pit of the stomach when walking.
185. Violent spasm of the stomach, griping sensation in the stomach.
. Clawing sensation in stomach.
. Constrictive pain in the stomach, hindering sleep.
. (Spasm of the stomach after a meal or from weakness.)

Abdomen :—

. Compressive pinching in the epigastrium, arresting the breathing.
190. Clawing (crampy), constrictive pain in the epigastrium after a meal, extending towards the left side of the abdomen and chest (after 100 h.).
. Pressure in the epigastrium.
. Excessive aching pain under the last true rib of the left side, increasing when bending the body forwards, by cough or an inspiration, but not by external contact.
. (Pain in the hypochondria, as if bruised) (after 12 h.).
. Continuous, fine stitch in the skin, in the left region of the stomach, going off when rubbing the parts.
195. Intermittent, dull stitches on the left side of and near the umbilicus.
. Fine pinching on the right side of and above the umbilicus.
. Pinching pain in the left abdominal muscles.
. Empty and hollow sensation in the abdomen, as if she had no intestines.
. Clawing (crampy) sensation in the abdomen (after $\frac{3}{4}$ h.).
200. Audible rumbling in the abdomen.
. Drawing pain in the intestines.
. Drawing pain in the abdomen from the right to the left side (after 4 d.).
. Violent colic after dinner, when walking, with sensation of chilliness and vertigo (8 d.).
. Cutting in the hypogastrium in the direction of the epigastrium, diminished by standing.
205. Continuous stitch in the right side of the abdomen.
. Several prickings in the left side of the abdomen.
. Stitches in several parts of the abdomen, only when stooping (after 15 h.).
. Tearing in the intestines.
. Burning in the abdomen.
210. Considerable distension of the abdomen.
. Troublesome flatulence shortly after supper ; the flatus distend now this, now that part of the intestines, and are emitted

with difficulty (after 5 h.).

. Flatulent colic about midnight; incessant formation of flatulence distending the abdomen, causing an aching pain now here now there, and going off one by one without producing much relief, and being continually reproduced for several hours; he has to turn from side to side in order to obtain relief (after 20 h.).

. Early in the morning, when in bed, she experiences a sharp and hard pressure in the lumbar region and the region of the kidneys, going off after rising.

. The flatulence becomes incarcerated and presses from below upwards.

215. Constrictive pain in the hypogastrium, wtth pressing towards the genital organs, and qualmishness in the pit of the stomach with inclination to waterbrash.

. Nausea (without inclination to vomit) coming from the right side of the abdomen and moving towards the umbilicus (immediately).

. Precursory symptoms of inguinal hernia (after 8 h.).

. Dilatation of the left abdominal ring, and disposition to inguinal hernia, with sore pain (after 14 h.).

. Continuous stitch in the right groin.

220. Painful disposition to inguinal hernia, especially after rising from a seat.

. Paralytic pain in the right abdominal ring, as if something would press through; pain as from hernia, only when sitting, and going off when rising.

. Pressing pain in the groins, as if the menses would make their appearance.

. Fulness within the groins, as if crammed; only in the sides, not in the middle, except when making a step forwards, then the thick parts felt as if they were being pushed along, and there was a feeling as of the whole going to pieces (in a few hours.).

Stool:—

. Constipation, lasting several days.

225. Hard stool every other day, which can only be expelled with great difficulty.

. After stool, violent tenesmus of the rectum, even unto fainting.

. Soft stools, diarrhœa (after $\frac{1}{2}$ h.).

. Frequent small evacuations (in a few hours.).

. (Several, light-colored, pale stools every day.).

230. (Slimy stools.).

. Emission of hot flatulence previous to the diarrhœa.

. Desire for stools, followed by fetid diarrhœa.

. Soft, thin stool (after 1 h.).

. Desire for stool and flatulence at the same time, the emission of flatulence being accompanied with a sudden expulsion of diarrhœic stools, in small portion and at short intervals.

235. Unsuccessful desire for stool, with constipation, for three days;

hard stool on the fourth day, expelled with great difficulty.

. Incipient desire for stool in the rectum; but the peristaltic motion in the upper intestines is wanting, on account of which stool is delayed thirty-six hours (after ½ h.).

. Tingling and itching in the rectum, as if from ascarides.

. Contractive pain in the anus, hindering sitting, in the afternoon (after 20 h.).

. Burning itching of the anus.

Urinary Organs :—

240. (Retention of urine for ten minutes.).

. Watery urine (after 2½ h.).

. (He emits a quantity of watery urine at very short intervals, and the pressure upon the bladder is constantly renewed owing to fulness.

. Frequent desire to urinate, every quarter of an hour, with scanty emission, for thirty hours (after 4 h.).

. Pain in the urethra, with desire to urinate.

245. Stinging itching in the forepart of the urethra (after 13 h.).

. Tensive, aching pain in the orifice of the urethra, between the acts of micturition (after 1 h.).

. Stinging pain in the urethra (after 12 h.).

. (Desire to urinate of pregnant females.)

Male Genital Organs :—

. Stinging pain in the margin of the prepuce.

250. Itching of the scrotum.

. Itching burning of the scrotum.

. Violent pains in both testicles, as if bruised, especially when touched (8 d.).

. Stinging pain in one of the two testicles.

. Drawing pains in the testicles.

260. Excitation of the genital organs and desire for an embrace.

. Increased excitability of the genital parts.

. Nightly emission of semen (after 6 h.).

. The genital organs become relaxed during the night, and the prepuce retreats behind the glans (after 12 h.).

Female Genital Organs :—

. The menses appear too early by seven days, distension of the abdomen, and contractive pain, with cutting sensation, at every motion and inspiration; accompanied by a contractive feeling in the rectum (after 48 h.).

265. The menses appear eight days too soon, with distension of the abdomen and pain in the epigastrium, which is felt not only at every motion—every step she makes causing pain but also when sitting; as if the inner parts suffered a sharp pressure from a stone; when touching the parts they experience a pain as if there were ulcers internally.

. (Suppression of the menses, with oppressive abdominal spasms, flatulence, lameness, anguish, oppression of breathing, spasm in the chest, attacks of nausea unto fainting, and jactitation of the limbs.)

. (Scanty, irregular period, with leucorrhœa between the periods.)
. (Painful menstruation, with copious discharge of coagulated blood and subsequent hæmorrhoids.)
. (Discharge of bloody mucus from the uterus, during pregnancy.)
270. (Uterine spasms, particularly with suppressed or irregular menses.)
. (Metrorrhagia.).
. Leucorrhœa.
. The menses which had been suppressed a whole year, reappear immediately (in two cases).

Cold, Catarrh :—

. Sneezing.
275. He is unable to sneeze when walking in the open air.
. (She blows bloody mucus out of her nose.).
. The anterior corner of the nostril near the tip of the nose is painful to the touch.
. Violent coryza the whole day.
. Ulcerative pain in the left nostril, without touching the parts.
280. Violent coryza for four days.

Respiratory Organs and Chest :—

. Tenacious mucus in the larynx, obliging him to hawk it up.
. Irritation in the upper part of the larynx, inducing cough.
. Cough, which becomes fatiguing, owing to an oppression of the chest which was brought on by the cough (in 48 h.).
.. Irritation in the larynx, posteriorly, in the evening when in bed, inducing cough, two single expulsions at a time.
285. Every fourth night he is roused from sleep by cough, at midnight or at two o'clock, with dryness of the mouth ; when coughing the throat did not seem wide enough.
. Contractive sensation in the trachea, as if irritated by smoke, inducing almost constant cough.
. Sensation in the pit of the throat, as if something were lodged in that part, which arrested the breathing ; the throat feels constricted.
. Audible rumbling apparently in the left side of the chest, as if owing to an emptiness, especially felt when walking (after 3 h.).
. She has no breath, her breathing is very short.
290. Asthma and difficult breathing.
. Tensive constriction of the right side of the chest, oppressing the breathing (after ½ h.).
. Oppression of the chest especially in the region of the upper part of the sternum, arresting the breathing (after 4 h.).
. Sibilant, snoring breathing, with oppression unto suffocation, especially during an inspiration ; the breathing is very slow and sometime entirely arrested, and the face is distended as in apoplexy.
. (Rawness and sore feeling in the chest.).
295. Aching pain of the middle of the sternum, with anxiety, afterwards the pain in the sternum, becomes stitching (after 3 h.).

. Pain in the middle of the sternum as if a dull instrument were being pressed upon it.

. Sudden pressure in the sternum, as if a fist were knocking against it.

. Dull, drawing pain in the right side of the chest, when inclining the body to the right side, sitting or standing, the pain continues as long as the inclination of the body lasts.

. His chest became so tired from loud reading, that he was not able to continue the reading without making a great effort.

300. Stitches in the interior of the chest synchronous with the pulse, when sitting, continuing without interruption for at least a quarter of an hour.

. When walking he feels a violent stitch through the chest extending to the back.

. Intermittent, dull stitches in the forepart of the false ribs of the right side.

. Stinging pain in the left half of the chest, during an inspiration, in paroxysms.

. A few stitches in the right side of the chest (after 2 h.).

305. Stinging pain in the sternum when walking (after 48 h.).

. Stitches in the right side (after 1 h.).

. Stitches in the left side (after 3 h.).

. Stinging in both nipples (after ½ h.).

. Shivering over the mammæ (after ⅛ h.).

310. A few stitches in the left side of the chest, near the præcordial region, in the evening (after 24 h.).

. Piercing pain in the articulations of the chest and all the dorsal vertebræ, as if they were sprained or were being spasmodically drawn together, especially during motion (after 20 h.).

. (Hysteric spasms in the chest, with sighing and moaning.)

Back —

. Paralytic pain in the small of the back.

. Paralytic pain in the small of the back, with spasmodic drawing across the hips, hindering walking, with anxious, apprehensive mood.

315. Paralytic, aching pain in the lumbar region.

. The bones in the small of the back feel bruised, this pain is not increased by contact.

. Several stitches through the abdomen and the lower part of the back, from before backwards, early in the morning when in bed.

. Tremor in the back.

. Itching in the back, in the evening after undressing, with eruption of red pimples.

320. Drawing pain in the side, towards the back, when talking, walking or stooping; when lying down the drawing increases for a few minutes, and ceases afterwards entirely.

. Aching pain in the back, especially the left side of it (when sitting) (after 5 h.).

. Drawing pain in the back.
. Tearing pain in the back.
. Boring pain in the back.
325. Pain in the back when standing, as if one had made too great an effort, or as if one had strained the parts (after 12 h.).
. Pain in the spine as if it would break.
. Tearing pain between the shoulder and the spine, in the evening previous to lying down (after 36 h.).
. Drawing pains under the left scapula, when standing or lying down, worse in the morning (after 6 h.).
. Intermittent, aching, paralytic pain, when at rest, under the left scapula.
330. When moving the shoulders, the parts behind feel stiff and painful.
. Stitching pain in the nape of the neck, when bending the head either forwards or backwards.
. Stitches in the scapulæ from the right to the left.
. Pressure in the scapulæ and the nape of the neck.
. Painful cracking of the cervical vertebræ, when moving the head.
335. Fine stitches in the outer parts of the neck (after 1 h.).
. Painless swelling of the submaxillary glands (after 8 h.).
. Paralytic drawing in the side of the neck and other places, sometimes resembling an intermittent paralytic pressure.
. Painful stiffness of the cervical muscles, when moving the neck or when yawning.
. Fine stitch, externally, in the side of the neck.
340. Pulsative stitches in the outer parts of the left side of the neck.
. Weakness of the muscles of the neck, with heaviness in the head, for several days; the cervical muscles appear too weak to support the head; he had to lean his head now against this, now against that, otherwise the cervical muscles felt painful; he was most relieved by leaning with his back against something.

Upper Extremities:—

. When lifting the arm, after a meal, he feels an excessive, drawing bone-pain in the shoulder-joint and the long bones of the arm; when touching the parts they feel bruised and contused.
. Single stitches in the shoulder-joint and the muscles of the upper arm, when at rest (after 1 h.).
. Itching stitch in the left axilla, like a flea-bite.
345. Pimple, below the shoulder, itching under the feather-bed.
. A sort of creeping as of something living, and a throbbing and burning, under the right shoulder, extending as far as the fingers (after 1 h.).
. A breaking, tearing or stitching pain in the shoulder and elbow-joint, and in the humerus; the pain being intolerable when at rest, with a sensation of pain; he is afraid of moving

his arm, although the pain decreases by motion (after 5 h.).

. Burning pain in the left arm, in paroxysms.

. Convulsions of the arms, with clenching of the thumb.

350. Pain in the arm as if gone to sleep and paralytic, during and after a meal (after 3 h.).

. The arm goes to sleep, with tingling sensation.

. A sort of paralysis of the arm while writing; he was scarcely able to hold his pen (after 4 h.).

. Intense, paralytic pain, as if the bones were broken in two, during a violent motion of the arm.

. When lifting the upper arms, they feel a pain as if broken.

355. The humerus, immediately above the elbow, feels bruised and a paralytic pain during motion.

. The arm, upon which he rests, feels painful as if bruised.

. Digging-up pain, with sensation as of wave-like drawing, and as if bruised.

. Drawing in the upper part of the humerus, with pain as if bruised.

. Jerking in the muscles of the left upper arm.

360. Pulsative, visible jerking in the muscles of the left upper arm, and immediately after, over the elbow of the right upper arm.

. Stitches in the right upper arm.

. Intermittent, dull shocks on the outer side of the left upper arm, below the head of the humerus,

. When eating, the right arm pains him a good deal; it feels heavy and weary when she attempts to raise it high up.

. Sudden paralytic pain in the bend of the right elbow

365. Continuous stinging in the left elbow (4 d.).

. Stinging pain in the outer side of the left fore-arm, extending down to the little finger.

. Aching pain in the upper surface of the right fore-arm.

. Intermittent, intense, almost tearing, paralytic pressure in the anterior muscles of the lower arm, especially when at rest.

. Pain in the glenoid cavity of the fore-arm, as if dislocated, during motion and contact.

370. The fore-arm goes to sleep, with sensation in the hand as if swollen, and a constrictive pain in the muscles; the fingers are cool, the interior feeling icy-cold (after 3 h.).

. Cold sweat, now of one, now of the other hand.

. Sweaty hands (immediately).

. Both hands, now the one, now the other, are insensible, and as if they had gone to sleep.

. Both hands, now the one, now the other, are alternately hot or cold (after ¼ h.).

375. A blister on the border of the hand, where the little finger terminates; it comes on in the night and runs out next day (after 5 d.).

. Her hands tremble when eating, the trembling increasing in proportion as she lifts the hand higher up.

. Spasmodic pain in the outer surface of the right hand and four

fingers, the hand feeling somewhat hot.
. Cramp-like contraction of the finger.
. Cramp-like pain of the right little finger when writing.
380. Spasmodic, stitching pain from behind forwards, in the right index-finger.
. Painful, paralytic drawing through the fingers (6 d.).
. Tearing, boring, drawing pain in the fingers.
. Titillating itching of the ball of the thumb, going deep into the part, not diminished by scratching and friction (after 16 h.).

Lower extremities:—

. Pinching in the right glutei muscles, when sitting; afterwards the pinching is converted to dull shocks.
385. Stitching pain in the left hip-joint, when walking (5 d.).
. Cracking and painful sensation in the left hip-joint, when turning the thigh, especially perceptible when walking (after 24 h.).
. Repeated stitches in the outer parts of the left hip-joint.
. Twitchings in the muscles around the right hip-joint.
. Paralytic pain, aching at intervals, in the left os innominatum.
390. Pain as if bruised, at times aching, in the middle of the left thigh.
. Stitching pain in the whole of the right femur, only when walking.
. When sitting, violent, pulsative stitches in the outer side of the left thigh, occasioning involuntary motions.
. A paralytic, rigid feeling goes through the left limb at intervals, from the middle of the thigh down to the foot.
. Rigid feeling from the thigh downwards over the knees.
395. Paralytic drawing in the thighs, with weakness in the knees, as if they would bend suddenly.
. Paralytic sensation in the left thigh, worst when at rest.
. The thighs feel paralyzed and bruised.
. When walking in a circle from left to right, the internal side of the left thigh feels painful as if bruised.
. When raising the thighs, they feel a pain as if broken.
400. When commencing to walk, after sitting, the thighs feel painful as if bruised.
. When raising the limbs while sitting, the thighs are intensely painful as if bruised.
. Constrictive, painless sensation along the thigh, occasionally with a sensation as if the thigh would become rigid; afterwards the constrictive sensation descends into the muscles of the leg below the bend of the knee.
. Drawing pains in the feet.
. Tearing pains in the feet.
405. Boring pains in the feet.
. Paralytic immobility of the lower limbs (after 24 h.).
. A boil on the inner side of the thigh (after 12 h.).
. Tremor in the thighs, when kneeling.
. Cracking of the knee during motion (immediately).

410. Intolerable drawing pain in the knee, after sitting, when rising.
. Stitches in the knee.
. Drawing, tearing pain in the patella.
. Severe stitch in the left knee-joint (after 27 h.).
. Continuous stitch when walking, in the outer part of the left knee-joint (6 d.).
415. Cramp in the calves, in the night, when bending the knees.
. Tensive pain in the calves, during motion.
. Violent stitches in the skin of the left knee when sitting, every stitch causing him to move the limb involuntarily.
. Itching in the left knee-joint, the calf and tarsal joint when walking ; the itching disappeared when standing, and returned when walking.
. Great weariness in the knees, as after a violent journey, frequently returning (immediately).
420. Sensation below the left knee as if he had tied his feet too fast with a garter.
. Constrictive sensation in the outer side of the left leg, more stupefying than painful.
. Dull, undulating, paralytic pain in the external side of the left leg from above downwards, when walking, after sitting, the left foot goes to sleep, and experiences prickings.
. Both feet go to sleep when sitting.
. Swelling of the foot in the evening.
425. Cold sweat of the feet.
. Heat and swelling of the feet, with continual, corrosive itching.
. Itching of the tarsal joint, violent pain in the tarsal joint, as if sprained, during motion.
. Pain, as if bruised, in the dorsum of the feet, when bending the foot from below upwards, and when touching the foot (after 3 h.).
. Tearing jerks and tearings in the otherwise painless corn; in the evening when at rest.
430. Pain in the posterior joint of the big toe, as if a chilblain or a boil would form ; painful to the touch.
. Tearing pain in the big toe, even when at rest.
. Drawing pain in the right toes (after 4 h.).
. Corrosive pain in the toes (after 3 h.).
. Pain in the interior of one heel, apparently in the os calcis, as if bruised (after ½ h.).

Sleep;—
435. Indolent, and taciturn.
. If he sleeps ever so little less than usually, he feels weak.
. Disposition to lie down.
. Continual yawning and stretching of the limbs after lying down in the bed.
. Short yawnings, one is not able to take sufficiently deep breath when yawning.
440. A good deal of yawning towards evening.
. Violent yawning.

. Violent yawning, with cracking in the left ear.
. Sopor.
. Coma vigil.
445. When sleeping he lays himself upon his face.
. When sleeping he lays one arm under the head (after 4 h.).
. Frequent waking from sleep.
. Frequent waking, with a start.
. He frequently wakes in the night, with a sensation as if he were too warm.
450. Sleepless night, restlessness of the whole body; stinging and biting in various parts.
. Ideas about his daily business crowded upon his mind and hindered sleep for an hour, he woke at one o'clock, without being able to fall to sleep again.
. He wakes in the night with a sort of fear, as if he had to dread ghosts.
. Vivid dreams, exciting fear (after 2 h.).
. Dreams about life and death.
455. He dreams he had committed an evil deed.
. Vivid dreams which he is unable to recollect.
. He dreams his knees were swollen and painful.
. She screams when asleep, calls to her mother and sisters with hurried, anxious breathing; she moves her hands over the cover of her bed, grasping at things and pushing things away from her; at the same time she opens her eyes, distorts them without waking, and continually moves her head, especially towards the left side.
. Sleep is interrupted by frequent startings.
460. Frightful anguish which seems like a dream, hindering sleep.
. He is drowsy during the day.
. He wakes up late in the morning; he finally woke, but he was unable to open his eyes.
. Laziness and want of disposition to speak, in the morning after waking.
. He has not slept enough, when waking in the morning, and yawns unceasingly.

Fever:—

465. Shivering in the back, in the evening, chilliness in the back, as if he were touched with ice here and there, not yielding to the warmth of the stove.
. Shuddering of the lower parts of the body (very soon) chills over the whole body in the afternoon.
. Chills of half an hour (at 8 o'clock) in the morning, without thirst or subsequent heat.
. General coldness, without shuddering, with bluish hands (the first hours).
. Returning, although short shuddering, especially through the lower limbs (immediately).
470. Thrills of shuddering through the whole body.
. In the evening he is suddenly attacked with chilliness, he

trembles, without feeling cold to the touch, being at the same time desirous of strong, stimulating nourishment.

. When touching the face with the hands, they appear cold; when touching one hand with the other, they appear warm.

. Trembling of all the limbs, always accompanied with chilliness, which does not even pass off in the warm room, especially in the evening.

. Cold thrill over his back, although he sits near the warm stove (8 d.).

475. Chilliness, and feeling of coldness in the back.

. Chilliness, not going off by the warmth of the stove, with violent colic (8 d.).

. Violent chilliness over the whole body, in the evening (7 d.).

. Feeling of cold on the shoulder, without any cold being perceptible externally (after 4 h.).

. Fever: frequent chills, afterwards flushes of heat about the head.

480. Fever; alternation of heat and chilliness of the body (in some hours).

. (Fever: chilliness increasing progressively, with little or no thirst, warm forehead, cold malar bones, cold nose and icy-cold hands, afterwards heat with great anxiety, as if he had no sufficient breath, with nausea and violent thirst, until sweat broke out; the sweat was not copious, cool, only about the head and hands, anxiety continuing.)

. Fever: frequent thrills of shuddering during the day, as when one warms one's-self near the fire in the cold air; these thrills are followed by heat, he grows faint, has to lie down, but without either thirst or sweat.

. Fever: in the evening hot hands, with sensation of dry heat over the whole body, with sleeplessness until 4 o'clock in the morning, afterwards shuddering and cold hands the whole day.

. (The outside of the body feels hot, without the prover experiencing any heat himself, without thirst) (after 5 h.).

485. Burning heat in the cheeks, with cold feet.

. The pulse is not more frequent, but very small and hard.

. Heat in the forehead.

. Increased feeling of heat, quick pulse (after 24 h.).

. Redness of the left hand, with drawing in the middle finger (4 d.).

490. Glowing cheeks, with chilliness of the whole body.

. Quick alternation of heat and chilliness; she is suddenly attacked by heat, extending from the feet over the whole body; accompanied with a sensation as if the blood were rushing to the face, although she looks at the same time more pale than red; in a few minutes she experiences a thrill of icy coldness from the head to the feet, and the heat disappears for a moment; these paroxysms occur several times a day.

. Frequent and violent flush of heat over the whole body.

. Frequent flushes of a disagreeable, burning heat and redness of the cheeks, as is felt during a fit of chagrin or upon the reception of a disagreeable piece of news.

. Heat and redness in the face, with thirst.

495. Desire for cold things, especially beer.

. Sweat over the body (immediately) from evening till morning, with cold sweat in the face.

. General morning-sweat, mostly on the chest and the affected part.

. Exhalation and slight sweat over the whole body, during the slightest motion (after 1 h.).

Skin :—

. Burning, dull stitches in different parts.

500. Burning-itching stitches, like flea-bites, in various parts of the skin.

. When touching the affected part (which had been swollen and inflamed) with his fingers, it experiences a fine stinging, as if he pressed the point of a needle upon it.

. Itching of the skin of the body, especially in the evening, when taking off the clothes.

. Violent smarting itching of the skin of the whole body, as after copious sweat, when undressing (after 16 h.).

. Itching of the skin under the bed-clothes; the itching increases after scratching.

505. Itching and burning of the skin, especially the inner side of the thighs, as of nettles; that part is also covered with pimples, becoming affected with a stinging pain when touched.

. Itching of various parts in the night; the parts are painful after the scratching.

. Itching during the night, partly of the chest, from the præcordial region up to the throat, partly of the parts covering the tibia, and in the axillæ; after scratching bloody lymph oozes through the pores (after 4 h.).

. Single pimples, becoming filled with pus, and afterwards drying up and disappearing, over the nose, on the temples, chest, and between the scapulæ.

. Red, miliary pimples in the face, on the back and chest, itching in the warmth, but not when undressing.

510. A sort of hard blotches, containing no fluid, surrounded with a red border, burning and itching the whole day, on the limbs, the wrist, and the back of the fingers.

. Red, irregularly shaped spots upon the skin, upon the whole of the chest, and on the sides of the neck behind the ears, as if colored with red wine, without heat or sensation.

General Symptoms :—

. The muscles of the limbs are painful to the touch (after 24 h.).

. He avoids the open air.

. The open air is too cold for him.

515. Intolerance of both the cold and warm air.

. He cannot bear the open air, with heat and redness of the cheeks (after 4 h.).

. The limbs are painful when moved, as if they were broken or crushed by bending.

. Subsultus of muscular parts, especially in the lower limbs, as after a long journey on foot.

. Intensely painful paralytic drawing, continuing for a time, and beginning with a jerk, in various parts of the limbs, apparently in the bone.

520. Digging-up bone-pain, in the interior of the limbs.

. Pain in the interior of the limbs, increasing by contact and external pressure (after 24 h.).

. Drawing pain in the limbs of the left side.

. Drawing pain in the limbs and abdominal muscles, as after a cold.

. Cracking in the joints.

525. Cracking in the joints when walking.

. Painful stiffness of all the joints, at times in the hands and fingers, at times in the knees and tarsal joints, for two days (after 24 h.).

. Painful stiffness of the joints (after 8 h.).

. Alternate going to sleep of the feet and hands, in transitory paroxysms.

. Fits, Weakness: Disposition to tremble (after 1 and 6 h.).

530. Trembling of all the limbs.

. Want of vital energy.

. The limbs feel paralyzed.

. Paralytic immobility of the limbs, with drawing pains, apparently in the bones.

. Attacks of paralytic weakness with pain in the small of the back.

535. Apoplexy of the left side.

. A sort of epilepsy: He enters the room with a cheerful countenance and sits down, feeling intoxicated as it were; afterwards he becomes quite still and stares for a long while at one spot, without answering any questions; he then falls down without consciousness, writhing and muttering unintelligible things; involuntary emission of urine; spasmodic, paroxysmal concussions of the limbs and the whole body, convulsive clenching of the fingers, the hands being stretched out; paroxysmal choking in the throat, the mouth being half open as if he would vomit, with foam at the mouth, in the shape of bubbles; the hands are cold, the face is covered with cold sweat and spasmodically distorted, the eyes look glassy and protruded; after this fit he rises, without however answering any questions, clenches his teeth, looking at those who interrogate him, with his teeth clenched, does not suffer himself to be touched, tries to push away those who surround him, to wrestle with them; his face has an expression of wild rage; finally he groans and moans; after fifteen minutes he gradually recovers from his fit, and recovers his senses, feeling,

however, an aversion to every kind of food or drink, even those that he was generally very fond of (after ¼ h.).
. He feels weak after the least motion ; every trifle affects him.
. He feels very weak from a little walk.
. She is so weak that she had to sit down in performing a light work which she was in the habit of doing standing.
540. He came near falling over from weariness in the knees, he staggers when walking, and threatens to fall to one side.
. Painful paralytic weakness in arms and legs ; she is scarcely able to rise ; with want of appetite.
. Faintness of the body, especially when sitting.
. Excessive weakness of the body when walking.
. Great weakness of the body, he found it difficult to stand firmly.
545. At nine o'clock in the morning, her limbs felt so heavy and her whole body so weary, that she was unable to keep herself from sleeping, for several days, at the same time.
. Fainting fit.
. Fainting fit, with spasmodic distortion of the facial muscles, when moving the body.
. Excessive weakness.
. Cocculus excites tearing pains in hard glandular swellings.
550. Excites stitching pains and heat in cold glandular swellings, at least when touched.
. All the symptoms and pains especially in the head, become aggravated by drinking, eating, sleeping, or talking.
. The symptoms are extremely aggravated by smoking.
. The symptoms are increased by coffee.
. Flushes of heat in the face after drinking.
555. The symptoms, especially the headache, are extremely aggravated by cold air.
. Hæmorrhages.

[Peculiarities :—

Aggravation, morning, afternoon and evening.
Remission, night and forenoon.
While eating chilly.
Saliva predominantly decreased.
Chill predominant on back part of body ; sweat on front part.
Ailments from Chamomilla, Ignatia, Nux Vomica, and Copper.
Predom. worse outdoors, and when walking outdoors.
„ from cold, cold diet, and drinking cold water.
„ from uncovering.
„ when getting out of bed.
„ when lying on back.
„ when sitting erect.
„ when bending diseased limb side-ways.
„ when lifting suffering limb.
„ from exercise.
„ when walking, walking fast, and running.
„ from bodily exertion generally, and after stool.

Predom. worse while perspiring.
„ „ when swallowing saliva.
Predom. better indoors.
„ „ from warmth, and warm diet.
„ „ from wrapping up.
„ „ when lying on side.
„ „ when sitting bent forward.
„ „ when letting suffering limb hang down.
„ „ during rest, standing and lying in bed.
„ „ after sweat.
„ „ from biting (clenching the teeth).
„ „ on an empty stomach.—Gross's *Comp. Mat. Med.* By Hering.]

EDITOR'S NOTES.

NORMAL TEMPERATURE IN INDIA.

Dr. Alexander Crombie, Resident Surgeon, Calcutta Medical College Hospital, has published a most elaborate paper "on the Range of Normal Temperature in India" in the last (January) number of the *Indian Annals of Medical Science* just (April) out.* The following conclusions are based upon observations exceeding 1500 in number, chiefly made on his own person, and carried on continuously since his arrival in India in July 1872, at Dacca, and in Calcutta, and also on a considerable number of comparative observations on the natives of this country. In Dr. Crombie's observations the temperatures were taken in the mouth, and he has found that these are in excess of those taken at the axilla by 0.25°, and less than those taken in the rectum by 0.4°. Every practitioner must have found that keeping the bulb of the thermometer in the axilla or anywhere else for 3 minutes only, as directed in our text-books, is quite insufficient to give us the accurate temperature. And we are glad to find Dr. Crombie has found and pointed out the error. He thinks 10 minutes to be enough for all practical purposes, the mean error after that being only 0.153.° As far as our own observations go, the period of 15 minutes is what gives strictly accurate data.

1. The mean temperature of Europeans is raised from 98.0° to 98.5°F. by residence in the climate of Lower Bengal.

2. Nevertheless the extent of daily fluctuations seems to be constant and uninfluenced by change of climate, being 1.3°F. both here and in England. The temperature-curve in India is parallel to that in England, only it is half a degree higher, ranging from 97.7° in the early morning to about 99.0° in the evening, which are the periods of minimum and maximum temperature in both countries.

3. The temperature of natives of India, including East Indians, is higher than that of Europeans resident in it, by about half a degree of Fahrenheit.

4. The chief causes of variations of temperature are (1) exercise and food which *raise*, and (2) sleep at unusual hours which *depresses*, the temperature. So long as these are within physiological limits, variation at any particular hour does not exceed 2°, and the whole diurnal variation does not exceed 2.6°, which variations it is

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* It appears that the *Calcutta Journal of Medicine* is not the only Journal which is in arrears.

necessary always to bear in mind, in order to take them into account when on the lookout for abnormal temperature.

5. As a matter of course the temperature is raised by whatever hinders, and lowered by whatever promotes, radiations and evaparations from the surface of the body.

6. The temperature of children is lower than that of adults during the first week after birth. The temperature of children is liable to greater variations than that of adults from similar causes acting on them afterwards.

7. The health of Europeans in India may be regarded with suspicion, if his temperature is persistently above 98.5° in the early morning, or 99.5° in the evening, and is not due to exercise. A temperature of 99.0° in the morning, or 100.0° in the evening at rest, is not incompatible with perfect health in the case of natives.

INSTANTANEOUS ABSORPTION OF ECCHYMOSES UNDER THE INFLUENCE OF ELECTRICITY.

A case is reported in *Les Mondes* (April 2) of a coachman who, having had a fall from his seat over the heads of the horses he was driving, had received severe bruises in the regions of the deltoid and of the great trochanter. The parts were painful and ecchymosed. Immediately on the application of a current of electricity it was seen under the electrodes that the parts the least discolored rapidly regained their normal hue, and the parts the most discolored notably lost the discoloration, at the same time the pain diminished so much that the man could move his arm, bring his hand to his head, and stand upon his legs. On the following day he could use his limbs, and in four days he resumed his occupation.

No other means that we know of could bring about such a satisfactory result in so short a time. The rapidity of cure in this case ought to induce every physician to try the same means in similar cases.

THE BURDWAN FEVER.

SEQUELÆ.

The first and most frequent in order, is enlargement of the spleen. It is found in at least three-fourths of the people affected, and vary considerably in size, from being just perceptible under the costal cartilages to filling up the whole abdomen. In a female it occupied such an immense bulk that a Sub-Assistant Surgeon mistook it for an enlarged ovarian cyst and suggested operation as the only means of cure. The fixture of the tumor above and its comparative mobility at the lower end convinced him of the error in his diagnosis. In children indurated, enlarged spleen is very common, and it is this, which makes the belly so protruberant. From a distance the pot-bellied feature with distended veins on the surface of the abdomen gives an appearance of dropsy, but palpation will soon decide the question. Abscess of the spleen is a rare termination. A case was shown to me at Jehanabad as such, but on examinaion I satisfied myself that it was an abscess over the spleen between the layers of abdominal muscles opposite which the tail of the organ had contracted adhesion with the peritoneal wall. The absence of any serious symptom helped me much in arriving at the conclusion. In those in whom the organ becomes enlarged to a good size at each febrile accession and diminishes as rapidly after its subsidence, the enlargement is a fluid one from accumulation of blood, but in others it is formed of organized tissue and the feel is tough and indurated. The greater the induration the longer the time it takes in recovering. The indurated organ after the lapse of time becomes a natural constituent of the body and is compatible with health. Such is the case with people in those districts where the influence of malaria after a prolonged continuation has worn out. The enlargement is attributed to a sub-acute inflammation, but in no time of the progress of fever is any complaint made indicative of an unhealthy action going on. Sometimes an aching pain is felt over it, but never before the organ has assumed a good bulk. The enlargement is made up of tissue that forms the trabeculæ and the investing sheath of the spleen. I consider the thickening as not an inflammatory process but allied to natural hypertrophy due to constant fulness of the organ from stasis of blood during each paroxysm when as a diverticulum the blood tends to collect in it. The softening of the spleen is rare, and my experience is borne out fully by the observations of other officers in this endemic district. In the absence of an opportunity for post mortem examination, I cannot definitely say whether any death from that cause has resulted. In cases of inflammatory deposit the subsequent change of contraction is of frequent occurrence causing atrophy of the organ. In the liver, as I will presently notice, such changes take place very often. But in the spleen my experience fails to cite one case where atrophy followed enlargement. This would have been the result, at least in some instances, if the process were altogether inflammatory. Congestion of the spleen takes place in all remittent fevers when the organ becomes enlarged and tender.

Enlargement of the liver is not so common and is observed in about twenty per cent. of patients seen. Its enlargement is generally due to sub-acute inflammation of the organ. In size I have never seen it extend below the umbilicus and it is always associated with enlarged spleen. As in all inflammatory process, pain and tenderness over the organ is felt. The inflammation ends in some instances in suppuration giving rise to large circumscribed abscesses. Intemperate habit has nothing to do with this morbid change, as I have seen as many cases in boys as in adults whose habit was abstemious. In one out of six cases, a previous history of dysentery could be traced. The abscess points externally with all the characteristic symptoms which it is not our object to describe in details. Suffice it to say, that in three cases it burst through the lungs. In two of them a favourable result was obtained and the other died from its effects.

Any thickening or enlargement of the margins of the portal fissure through which the vena porte enters the substance of the organ will tell itself in obstruction to the portal circulation and end in ascites. The large prominent veins on the surface of the abdomen show the obstruction offered to the venous blood, which obstruction is relieved by the effusion of serum into the peritoneal cavity. The proper secreting structure of the organ not being affected, jaundice is rarely seen.

Dropsy is the sequela with which these cases take a fatal turn. It is dependent on two different causes; 1st, hepatic and 2nd, general. Hepatic dropsy is the result of enlargement or cirrhosis, and is seldom recovered from. The lean emaciated limbs and haggard countenance set on a bloated trunk give a most unsightly appearance. Nutrition is interfered with from the inability of the individual to take in sufficient quantity of food, and emaciation progresses till death takes place either from pressure of fluid inducing imperfect aeration of the blood and bronchitis or dysentery. In most of these cases the history is, that they suffered previously from fever with enlargement of the spleen and the liver which, however, left them to enjoy a good interval of health. The collection of fluid in the abdomen was gradual and not attended with very acute symptoms. In some a previous history of dysentery can be traced, but besides these the patients suffer at the time from no other symptoms beyond what is felt by the mechanical distension of the fluid. It is note-worthy that when habitual drunkards become the subject of malarious fever they are more liable to this turn of the disease.

General dropsy is the result of an impoverished condition of the blood. The anæmic appearance, bloated face, œdematous limbs, laxity of tissues, all point to mal-nutrition. Diarrhœa or dysentery sometimes attend these symptoms and the patient is much reduced in strength. Irritative fever helps to lower him still more, and unless timely treated with tonics and nourishment, cancrum oris makes its appearance and puts an end to his miserable existence. It is remarkable how these patients improve when placed on a liberal and easily digestible diet, as milk and rice. The equilibrium of secretion and absorption is restored, the tissues regain their natural firmness and the œdema and peritoneal fluid are removed if the kidneys are gently acted upon. The majority of these cases are recoverable unless too far advanced. Unlike the other variety, the splenic enlargement is a common complication.

Cancrum oris mostly occurs in boys under the age of 15. It generally takes place towards the end of winter or beginning of summer, when after prolonged continued suffering the vitality is reduced to its lowest ebb. In the height of the fever-season other sequelæ are more common than this. It is quite unaccountable why the reduction of vital strength should be indicated by sloughing of a part, which, in the healthy state of the system, is freely supplied with blood and the injuries of which are quickly recovered from. The extent of sloughing varies from a patch of the size of a ¼ Rupee to extensive sphacelus involving the whole cheek and inducing necrosis of the superior maxilla. Horrible destruction of tissue takes place producing ghastly features. The orifice of the mouth is supplanted by a wide gap on the floor of which the tongue moves about with a peculiar wriggling motion. Extensive lesions are seldom recovered from, but a moderate degree of sloughing would heal with thickening and contraction of the surrounding tissues. Atresia oris and difficulty in opening the mouth make the future existence of the patient miserable to the end. No other condition will induce it with greater certainty than when in a broken down constitution, an acute attack of fever supervenes with dysentery. The subjects are always anæmic and possess large indurated spleen. Allied to the ulceration of the cheek, is the peculiar scorbutic condition of the gums and their ulceration. The loose teeth, swollen gums and their tendency to bleed are marked more in some season than in another. The ulceration is superficial and may expose the root of the tooth by destroying its soft covering when it drops off. From this it may extend to the hard palate and produce necrosis of bone and perforation. Any ulceration in the cavity of the mouth gives rise to a stinking fœtor. It should be borne in mind that in persons of undoubted scorbutic gums, extraction of tooth has been attended with fatal consequences. The constant oozing of blood from the socket proves too obstinate to be checked by any astringent application, and the patient dies in 24 or 48 hours from the effect of slow hæmorrhage.

Dysentery is sometimes an attendant complication of malarious fever. It is most frequent in the month of December and January, when increased cold, greater ranges of variation in hygrometry and temperature render the badly clothed peasants more liable to such attacks. It can be divided into two varieties according to their cause; the first is due to change of season, and the second to bad and insufficient nutrition.

The first variety occurs in persons who may or may not be the regular subjects of fever. They present tolerable health and, as a rule, are free from splenic enlargement. The enlarged spleen acts as a safety valve in all internal congestions with which each attack of fever is attended. If from toughness of the organ its distensibility is interfered with, the determination takes place to the intestines and produce dysentery.* This is the only explanation I can offer to the frequency of dysentery in malarious localities and which coincides with the fact of its existence mostly in persons whose spleens are not enlarged. Otherwise I deny the existence of any such disease as malarious dysentery which writers like Dr. Maclean maintain. The per centage of dysentery cases amongst hospital attendance seldom rises over five even in worst season of the year. Such a small number will be found also in places that are not malarious, and their presence should be looked upon in the light of coincidence than as an usual accompaniment of malaria. In the month of January the eating of new rice is a fruitful cause of bowel complication which may terminate in dysentery. It is a fact that a sharp attack of dysentery will in some instances reduce the size of spleen.

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* This is what the Editor of this Journal long ago insisted upon. In a series of articles published in the *Indian Field* (now defunct) in review of the "Report of the Committee appointed to inquire into the causes of the Epidemic, its course, and the best means of checking its further progress," which were afterwards published in a pamphlet form, in 1864, the following ideas were expressed upon the subject:—"The spleen, in fact, appears to us to act as a safety-valve to the disturbed functions of the alimentary mucous membrane and of the liver. We have accordingly always looked upon the early enlargement of the spleen as a salutary sign. And we have almost invariably seen that in these fevers, the gastric and the hepatic derangements continue obstinate, so long as there is no perceptible enlargement of the spleen. The first effects, therefore, of the enlargement of the spleen, are to avert the tendency to diarrhœa and dysentery. Again, the assumption, by these fevers, of the remittent type, seems to us to depend upon the want of an adequate safety-valve action of the spleen. And it is a notorious fact, that it is in the intermittent variety of the disease, that this organ is found the earliest and the most frequently enlarged."—*Ed.*

The second variety is observed in emaciated weakly individuals suffering from enlarged spleen and liver and whose constitution is broken down from continued suffering. This form of dysentery is most obstinate and is allied to famine-dysentery. Malaria has nothing more to do with its causation than by inducing broken health, it helps to predispose the system to it, when the blood itself is vitiated for want of proper and sufficient nourishment. Being due to a putrid condition of the blood these cases are difficult of treatment, and often prove fatal. Dysentery might occur with contracted liver as the premonitory stage of ascites.

Pigmentation of the skin was found in four instances only. The complexion of the skin assumed a dark bronzed hue as in Addison's disease. Two of these cases were under my own personal observation. Both of them were free from spleen, and fever in them took place very seldom. In one the change of colour set in just after recovery from an attack of dysentery. The mucous membrane of the mouth was blackened in patches in both instances. Half an ounce of blood was taken from the arm of one of these patients. It yielded 2 grs. of fibrine, on being stirred with a rod. Microscopical examination was unavoidably delayed for a week, when it was seen the blood corpuscles were fewer in number and wanting the dark central spot. Probably it was due to imbibition of fluid and decomposition that was induced in the serum by long keeping.

The change in the blood from malaria can be briefly noted in the following words, a hydræmic or a watery condition of blood, deficiency of red and increase of white corpuscles, and deficiency of fibrine.

From this hydræmic state of the blood much danger is to be apprehended in those conditions of the system which bring on sudden excess of its watery constituents or those which add to the plasticity of fibrine. The liability of pregnant women to embolism of the heart in a malarious district has never before been pointed out by any observer. Four such cases have come under my personal observation, in two of which it came on after parturition, and in two the symptoms were manifest during an acute attack of fever supervening in the 8th month of pregnancy. The hæmorrhage in the two former instances, and fever in the two latter, determined the formation of clot in the heart.

Besides, the watery state of the blood engenders a hæmorrhagic diathesis. Bleeding from the nose or gums is a very common complication. It takes place mostly in children with indurated spleen and sallow complexion. Death from slow persistent hæmorrhage after extraction of a tooth has been reported by previous writers. I had occasion to notice it in only one instance when the bleeding was stopped with some difficulty after 24 hours slow oozing.

Bleeding may take place from the mouth or rectum (melæna). The profuseness of discharge in such instances is often a subject for grave apprehension. In females an acute attack of fever sometimes brings on untimely the menstrual flux. I have seen 4 instances of melæna, 3 of which proved fatal.

Allusion has already been made to the anasarcous condition of the limbs which is the result of water in excess in the blood. Alteration in the quality of the blood renders it unfit for healthy nutrition. Its effect on the nervous system is shown in general languor and mental inaptitude. I have seen several cases of epilepsy both in boys and adults who have had the disease since they became regularly subject to fever, but whether it is to be looked upon as a coincidence or a sequence I am not in a position to decide. Most of the cases entered in the dispensary returns as rhemuatism are nothing more than perverted nervous feeling in the limbs. These cases abound in places where malaria is fresh and not deep-rooted. Nyctalopia or night-blindness is as much indicative of deficient nutrition of the system as of alteration or cessation of nervous function of the retinal structures.

Some writers attribute impotency to malaria, but the numerous instances of child-birth in the district negative any such assumption. General debility no doubt represses the procreative tendency, and under this head are to be credited the cases of still-births which are not of infrequent occurrence, and which tend materially to keep down the number of the population.

TREATMENT.

The treatment varies according to the stage of the disease. It requires thorough discretion and competent judgment to enable the patient to tide over the first attack, but when once it is got over and merges into a chronic type, any combination of quinine as tonic will be all that will be necessary in the shape of treatment. The reputation which some of the quack medicines have attained in the cure of fever is owing to their containing quinine in fair proportion. In Jamalpore a Pundit made his fortune by selling a mixture of his own composition, and so much as 100 bottles per day were sold in the fever season. D. N. Gupto's mixture received a very encouraging support, but this trade in mixtures fell off when quinine came to be freely supplied from the Endemic Dispensaries and when the people became sensible enough to learn that the recovery was a mere temporary one. The attendance at and reputation of a dispensary in the Endemic district depend more upon the quantity of quinine given than upon the skill and attention of its medical officers. Thus the daily attendance in one dispensary rose from 30 to 400 directly quinine was supplied for distribution, although no extra attention was paid in the discrimination of the proper nature of the disease. From 6 to 9 grs. of quinine were given indiscriminately, and every patient bore testimony to the marvellous efficacy of the mixture supplied. Wherever arsenic or carbolic acid or any other antiperiodic was substituted, the people lost faith in the medicine and the dispensary suffered in consequence. Thus it shows that quinine is *par excellence* the best tonic and antiperiodic. In it we have a powerful remedy to check the progress of intermittent fever and whatever has been said against it to detract its virtue, is not in conformity with the general experience. Even the patients themselves would ask to be supplied with quinine as the best remedy which their experience dictates. But the frequent relapses after recovery even whilst the patient is under the quinine treatment, shows that it has no curative property. To give quinine as a preventive of malaria is, I consider, a mistaken idea, for it is only powerful in remedying that condition of the system which is induced in every attack of fever by its peculiar effect on the ganglionic system of nerves, and thus restoring temporarily the equilibrium of health. A good dose before an expected paroxysm of fever acts more powerfully as a tonic and counteracts the depressing effect of malaria which is shown in the disturbance to the cutaneous circulation. The paralysis of the vessels and their dilatation form the principal phenomena of the stage of pyrexia. Quinine acts in remedying this condition not only in malaria but in other diseases, such as insolation, in which experiments have confirmed its power of reducing preter-natural heat of skin. In all cases of intermittent fever I content myself in giving a single large dose of it 8 or 4 hours before the expected paroxysm, and prefer it to small doses which, when given at repeated intervals long before the accession of fever, are excreted by the kidneys and do not exert much beneficial influence. After the fever has left ½ a grain of it with mineral acids and iron may be administered for some days as tonic, but should not be continued uninterruptedly for any length of time with a view to ward off any future attack. It should be repeated again and again when the threatening symptoms of fever begin to show themselves. If more than this is expected from this drug disappointment will be the result.

The other medicines, that have been recommeded as antiperiodic, are arsenic, carbolic acid, strychnia, Atees, &c.

Arsenic has been in vogue amongst the native Kavirajs as febrifuge from a very ancient date. They use it in acute as well as in chronic fevers complicated with anasarca and when, as they say, the phlegmatic humour preponderates in the system. White arsenic and sulphuret of arsenic are the preparations used; but according to them if arsenic can be burnt without volatilisation (?) it is the panacea for all diseases. Liqr. arsenicalis does not prove as effective as white arsenic, and is everywhere unfavourably spoken of. The number of patients fall off from the dispensaries if arsenic is largely prescribed. Its action being slow, several days' administration is necessary to produce a perceptible effect. In others it brings on irritation and increases the severity of the fever. It is contra-indicated in remittent congestive cases—or those in which the liver and spleen or any other internal organs are congested, or those complicated with dysentery or diarrhœa, or in those that are extremely emaciated from chronic suffering and have an irritable disposition. The most favourable cases are the quartan types of fever occurring in able-bodied men without any internal complication, whose system has been saturated with Quinine without any benefit. Carbolic acid answered in very few instances. In several cases it increased the febrile symptoms and delayed recovery. It succeeded in very mild cases of the quotidian type in which it is difficult to say how far the good was attributable to the medicine or to the vis medicatrix naturæ. In irritable and sanguine temperaments it disagrees. Its nauseous odour is a great drawback to its use. Its power of checking fever is very inferior to that of arsenic.

Strychnia or some preparations of it are very useful in persons whose systems have been saturated with quinine and in whom further administration of quinine acts as an irritant. Other antiperiodics are Atees, Neem, &c., but their effect is too slow and uncertain.

In the remittent type of fever, great care is necessary in its management. A purgative at the outset should be given and debilitating remedies should be withheld. If the bowels be relaxed a dose of Gregory's powder will free the bowels of irritating matters and relieve the tendency to congestion of the internal organs. Quinine in the acute stage acts injuriously especially when given in large doses. Even when given during the stage of remission, it seldom succeeds in putting a stop to the exacerbation. I never give more than 10 grs., if the case be a favourable one for its use; but the following prescription given every 3 hours for days, with support of the system by nourishing diet, generally brings on remission or intermission.

℞

Dec. cinchonæ ℥i
Liqr. amm. acet. ʒii
Acid. nitric. dil. ♏x
Spt. ether. nitrosi ♏xx. Mix. Every 3 hours.

In cases of debility Nitric Acid is replaced by Carbonate of

Ammonia, which acts both as stimulant and diaphoretic. Bearing in mind that fever is always debilitating in its nature, the strength should be carefully supported throughout the course of illness by proper nourishment as milk and broth. Active purgation after the first week should be withheld. I even allow the bowels to remain loaded for a day or two unless there be very urgent need for interference. Hot sponging should now and then be practised to allow the skin to act freely. I have no experience of Aconite or Veratrum to be able to say how far they are useful in bringing down the abnormal heat of skin, but I have often used Digitalis with good effect with the above mixture. Too much of medication sometimes helps to keep up the fever. When long continued quotidian fever merges into Remittent, active medication should not be practised unless there be urgent need for it. When the head is affected, cold water is an invaluable application. Other symptoms should be treated as they appear. The treatment of pneumonia should be always stimulating, with mild counter-irritants to the chest.

When intermission or full remission is obtained quinine can then be administered in 5 gr. doses. In chronic cases quinine with iron and mineral acids is very beneficial as tonic. Although it seldom helps to bring on complete recovery it has been found that those that use medicine constantly have suffered less in health, and the sequelæ of fever in them are insignificant in proportion. Attention should be paid to the state of the bowels, and any tendency to diarrhœa should be checked by opiates. In as much as cancrum oris is always indicative of a low state of vitality, good wholesome diet should be secured with tonics, stimulants and wine. Iron and Carbonate of Ammonia should be given with caution for fear of their inducing irritability of bowels.

Ascites due to a watery condition of the blood is very amenable to treatment. Quinine, iron and diuretics with milk diet would soon bring on convalescence. It seems to be the revival of the old practice amongst the Hindus of keeping all anasarcous patients with looseness of bowels chiefly and solely under milk-diet treatment. The good nourishment gives tone to the tissues and insufficiency of water in the blood makes it seek for that fluid amongst structures where it is redundant. Ascites due to liver disease is most difficult of treatment. The fluid must be let out through the way of the secreting and excreting organs, the the kidneys and the bowels, by means of saline purgatives and diuretics. Salines should not be given freely in the other form of ascites where it will deteriorate the condition of the blood and retard convalescence and recovery. Purgatives are to be administered with caution as there is a great tendency to dysentery with which most of these cases prove fatal. I have never seen a case recover after paracentesis, and I have to speak of it only in condemnation as a method of treatment that hastens death. Iodide of Potassium with Digitalis and Nitric Ether will form a good combination.

The best treatment to effect reduction of the size of the spleen is to ward off as much as possible each attack of fever or shorten its duration. A counter-irritant over the splenic region helps to make the organ soft and gradually smaller. Ung. Hydrarg. Biniodid. is the best counter-irritant in these cases. It should not be applied however in weak emaciated patients, or in those suffering from constant febrile heat, or in little children, or in ascitic cases, as the irritation of the blister makes the case worse. The skin ulcerates and is apt to take on an unhealthy action.

The Spleen simply enlarged and unaccompanied by fever sometimes becomes a natural organ of the body and cannot be reduced. Preparations of Iodine may help to cause its diminution in size. Chloride of Ammonium was once much spoken of but it has not satisfied the expectation of practitioners who have given it a trial on the recommendation of continental physicians.

The native way of treating an enlarged spleen is by applying the actual cautery over it. This practice is very extensively resorted to, so that in a malarious village one scarcely walks out but meets with persons with scars over the abdomen. From one to as many as thirty of them have been applied at a time and cases have been brought to my notice where persons have died in consequence of irritation, sloughing and exhaustion from the discharge from the cauterised surfaces or from hæmorrhage.

Various methods are followed of which the following is mostly in vogue in the district of Jehanabad.

The surface of the abdomen corresponding to the tail of the spleen is daubed with oil to the size of one Rupee and a dried palm leaf is applied over this, covering the oiled mark. The burning end of a pith is then rubbed over and over till the leaf is charred. The operator constantly blows on it to prevent it from setting fire to the leaf. The charring heats it to a degree to produce a singing effect on the corresponding portion of the skin beneath. The patients give expression to their suffering in loud cries and restlessness. The whole operation is over in a minute's time.

All these treatments are ineffective or partially successful as long as the patients remain in the tainted locality. Early removal from such to a better or more salubrious place offers the only chance of restoration to health.

THE PHYSIOLOGY OF DEATH.

Translated from the French of M. Fernand Papillon.

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In earlier days the anatomist alone subjected the spoils of death to examination, whilst the physiologist confined his attention to the phenomena of life. At the present day, however, the dead body is submitted to the same experiments as the living organism, and we seek the secrets of life in the debris of death. Instead of viewing the inanimate corpse as an assemblage of forms ready to dissolve and disappear, we discover therein forces and persistent activities the working of which is profoundly instructive. As the theologian and the moralist invite us at times to contemplate face to face the spectre of death and to fortify our soul in a courageous meditation of the last hour, so the medical man considers the investigations of the details of this lugubrious drama, essential in order to conduct us through the shadows and obscurities of death, to the clear light of the science of life; but this is the teaching of the most modern medicine.

Leibnitz, who propounded a profound and admirable doctrine of life, also evolved one of death which he expounded in a celebrated letter to Arnauld. He holds that generation is but the development and evolution of some animal already formed and that corruption or death is but the envelopment and involution of the same animal, which ceases not subsisting but remains alive. The sum of vital energies is consubstantial with the monads, which vary not in the world: generation and death are but changes in the order and concert of the principles of vitality; they are but the transformations from the little to the great and *vice versa.* In other words, Leibnitz sees everywhere some eternal and incorruptible germs of life which no more perish than commence. Those which commence and those which perish are the organic machines of which these germs constitute the primary activity; the elementary wheel-works of this machine are dissociated but no ways destroyed. Such is the first view of Leibnitz. He has a second: he conceives generation as a gradual progression of life, and death as a gradual regression also of the same principle, that is to say, that in death life disappears little by little, as in generation it advances little by little. Death is not a brisk phenomenon, a sudden disappearance; it is a slow operation, "a retrogradation," as says the Hanoverian thinker. When death appears to us, it must have worked since long time on the organism, but we had not perceived it because that dissociation commences at first in parts too small. Yes, death before transferring itself to our eyes by the livid paleness, to our hands by the coldness of marble, before paralysing the movements and freezing the blood in the dying, it obscurely and insidiously glides itself to the most minute and to the most secret parts of his organs and humours. It is there that it begins to corrupt the liquids, to disorganise the woof, to destroy the equilibrium and to compromise the harmonies. All this is more or less perfidious, more or less long; and when death has been manifestly proved to us, we can be sure that the work has nothing of the improvised.

These ideas of Leibnitz, as for the most part the conceptions of men of genius, were to receive, but long after they appeared, the confirmation of demonstrative experiments. Before Leibnitz the corpse was dissected but to observe there the normal confirmation and disposition of the organs. At one time this study terminated on one undertaking the methodical examination of the alterations which malady determines in the diverse parts of the corpse. It is only at the end of the 18th century that death in action became the object of the researches of Bichat.

Bichat is the greatest historian of the physiology of death. The celebrated work, "Physiological Researches on Life and Death," which he has left on the subject is also remarkable for the amplitude of the general ideas and the beauty of the style, as for the precision of the facts and the skill of experiments. It is still the richest mine of documents on the physiology of death. Having established that life is gravely compromised by the alteration of one of the three essential organs, the brain, the heart and the lungs, of which the assemblage forms the vital tripod, Bichat seeks how the death of one of these three organs determines that of the others and consequently the gradual arrest of all the functions. The progress of experimental physiology, of our days, in the way which Bichat had pursued with so much success, has made known divers mechanisms of death in their most minute details and what is most important, has revealed an entire order of activities, of which one had in the corpse up to then only a glimpse. The theory of death has constituted itself little by little in the same time as that of life, and several practical questions such as the signs of real death, hitherto left undecided, have received from his labours the most decisive solution.

I

Bichat has shown that the total life of animals is composed of two orders of phenomena, those of circulation and nutrition. He has distinguished organic life from animal life properly so called. Vegetables have but the first, animals possess the one and the other closely united. Therefore when death overcomes any animal organism, these two lives do not disappear together. It is the animal life which is struck all at first. It is the most manifest activities of the nervous system which arrest themselves before all the others. How does this arrest produce itself? What happens in death from old age, in death as a sequence of maladies, and what happens in sudden death, ought to be considered separately.

The man who extinguishes himself at the end of a long old age dies in detail. All his senses shut up successively. The sight obscures itself, is troubled, and it finally ceases to perceive objects; the hearing becomes gradually insensible to sound; the touch becomes blunted; and odours exert no more than a feeble impression; taste only persists a little longer. At the same time that the sensitive organs lose their excitability and are atrophied, the functions of the brain extinguish themselves little by little. The imagination becomes obscure, the memory defective, and the judgment uncertain. On the other hand in consequence of the rigidity of the muscles, the movements are slow and painful; the voice breaks itself; briefly all the functions of external life lose their elasticity. Each ligature which attaches the old man to existence snaps itself little by little. Pending this, internal life continues. Nutrition however still continues; but soon the forces adandon the most essential organs. Digestion languishes, secretion becomes tardy, capillary circulation is embarassed, that of the grosser vessels is suspended, in its turn and finally contractions of the heart are arrested. That is the moment of death. Such is the course of partial and slow death which the old man spared by malady, reaches at the last moment. The individual who sleeps in these conditions of eternal slumber, dies like the vegetable, which having no consciousness of life, feels none of death, he passes insensibly from the one to the other. To die thus has nothing of painful in it; the idea of the supreme hour frightens us simply because it puts a sudden termination to our relations with what surrounds us; when the sentiment of these relations has long since vanished, the fright can no more exist on the verge of the grave. The animal shivers not the moment he is going to cease to be.

Unluckily this kind of death is not common among mankind. Death from old age is now an extraordinary phenomenon. Most often we succumb to a perturbation, at times sudden, at times gradual, of the functions of our economy. Here as in the preceding case we see the animal life disappears the first: but the modes of termination are infinitely varied. One of the most frequent is death by pulmonary diseases: in consequence of divers forms of pneumonia and phthisis the blood is no more oxidized, because of the disorganization of the pulmonary cells the venous blood returns to the heart without being revivified. In cases of grave and continuous fevers and infectious maladies, epidemics and others, which before all poison the blood, death arrives by a general alteration of nutrition. This is more true still of death which takes place in consequence of certain chronic maladies of the digestive organs. When these last are altered the secretion of juice affected by the disolution of the aliments is deteriorated and the juices traverse the intestinal tubes without having been utilised. In this case the sick dies from a true inanition. One of the most frequent causes of death is hæmorrhage. When a large artery has been opened by some cause whatsoever and when blood has flowed in abundance, the skin becomes pale, the heat is diminished, respirations become interrupted, some dimness and some vertigo are manifested, the physiognomy changes expression, a cold and glutinous sweat covers one part of the visage and the members, the pulse gradually enfeebles itself, and finally the action of the heart is arrested. Virgil has painted with vivid truth hæmorrhagia in the recital of the death of Dido.

Sudden death without external and accidental causes can happen in divers manners. Most intense affections of the soul sometimes suddenly arrest the movements of the heart and determine a mortal syncope. There are many examples of persons dead from joy—Leo X is one—and of men who have succumbed to fright. In thunder-apoplexy if real death is not instantaneous there is at least a rapid production of mortal phenomena. The sick is plunged in a profound slumber, to which the doctors give the name of coma. He cannot be re-awakened, his respiration is difficult, his eye is immoveable and his mouth contracted and deformed. The beating of the heart ceases little by little and soon life disappears without return. The rupture of an aneurism very often hurries to sudden death. This has not unfrequently for its cause what one calls an *embolus* that is to say, an arrest of circulation by a clot of blood which obstructs all at once a vessel of some importance. Finally it remains of some cases of sudden death still inexplicable in this sense that autopsy discovers nothing which might render clear to reason the arrest of vital operations.

Death is ordinarily preceded by an assemblage of phenomena, to which the name of agony has been given. In most maladies the first appearance of this terminal period is marked by a sudden amendment of the functions. This is the last flash of the expiring flame: but soon the eyes become immoveable and insensible to actions of light, the nose becomes slender and frozen, the gaping mouth seems to appeal to air which it lacks, the buccal cavity is dessicated, and the fading lips are glued to the dental arcades. The last respiratory movements are spasmodic, and a rattling and sometimes a veritable gurgling, due to obstruction of the bronchial tubes by abundance of mucus, is heard from a distance. The breath is cold and the temperature of the skin is reduced. By auscultation of the heart its enfeebled sound and beatings are perceived. The hand applied to the region of the pericardium no more perceives the impulse. Such is the physiognomy of the agonised in the majority of cases, that is to say, when death follows upon a continued malady. The agony is rarely dolorous and is very often ignored by the patient. He is plunged in a comatose drowsiness such that he has no consciousness of his situation nor of his sufferings, and he passes insensibly from life to death, so that it is sometimes difficult to assign the precise moment when the moribund has expired. Such is the case at least in chronic maladies and in particular in those which slowly and silently consume the body of man. Nevertheless when the hour of death is struck in ardent organisms, in cases of great artists, for example, and they ordinarily die young, there an awaking, sudden and sublime, of creative genius. Nothing exemplified this half so well as the angelic end of Beethoven, who, before exhaling his soul, that melodious monad, recovered his hearing and voice which he had lost, and made use of them by repeating for the last time some one of his sweet accords which he called his "prayers to God." In short, certain maladies are characterised by the smartness of the agony. Of all the infirmities which deceive us and maintain for a long time the illusion of health, phthisis is one which kills us as it were with the pinching of a pin, and conceals from us best the evils of life and the horrors of death. Nothing is comparable to the hallucination of the senses and the vivacity of hope which mark the last days of the phthisical patient. He takes the ardour of the fever which consumes him by salutary symptoms, he makes projects, he smiles at his neighbour a sweet and serene smile, and all at once on the morrow of a peaceful night he sleeps to wake no more.

If life is everywhere and if in consequence death takes place everywhere in all the elements of the economy, what makes us think of the point of the spinal cord, which a celebrated physiologist has called the Vital-knot, where he pretended to localise the very principle of life? Flourens thought that the vital-knot is situated a little near to the middle of the elongated marrow, that is to say, at the middle of the portion of the nervous substance which connects the encephalon to the spinal cord. This region is in fact of an extreme and redoubtable susceptibility. It suffices to prick it by enforcing a needle in order to bring on immediate death of the animal, whichever it be. This is the means which is employed in physiological laboratories for promptly and surely sacrificing dogs. This susceptibility is explained in the most natural manner. This point is the origin of the nerve which goes to the lungs; the moment there is any lesion in it whatsoever, there results therefrom an arrest of the respiratory movements, consequently death. The vital-knot of Flourens has no kind of special prerogative. Life is there no more concentrated, is no more essential than elsewhere, only it coincides with the origin of the nerves which animate the indispensible organs of vitality, the organs of sanguification. Now in living organisms any alteration in the nerves which govern a function is a great peril to its integrity. The vital-knot therefore is not there, the hearth of animal life is not situated there. It is the collection of an infinity of infinitely small living beings, and each of these microscopic beings is to itself its proper hearth. Each nourishes itself on its own account, produces heat and manifests the characteristic activities which depend on its structure. Each, in virtue of a pre-established harmony, occasions in that which demands the other; but in the like way that each lives on its own account, each dies on its own account. And the proof that it is so, is that certain portions taken from a dead body can be transported on a living, without having suffered interruption in their physiological activity. The proof is that several organs which seem dead can be excited anew, awakened from their torpor and solicited to vital manifestations extremely remarkable. This is what we are now going to consider.

II

Death appears definite from the instant that the beatings of the heart are arrested without return, because the circulation of blood no more exists, nutrition of organs becomes impossible and because nutrition is necessary to maintain physiological harmony; but as we have said above, there are in the organism, thousand small springs which conserve a certain activity even after the grand central spring has lost its. There is an infinity of partial energies which survive the destruction of the principal energy and does not disappear but by little and little. In the case of sudden death specially tissues retain for a long time their proper vitality. At first heat disappears but slowly, so much the more slowly that death has been the more rapid. Many hours after death, the hairs of the head, the hairs of the body and the nails still grow; absorption is not still arrested. In fine, digestion continues. The experiment which Spallanzani made for proving this, is most curious. He made a crow eat a certain quantity of meat and killed it immediately after this repast. He then kept it in a place of which the temperature was equal to that of a living bird, and he opened it at the end of six hours. The meat was completely digested.

Besides these general manifestations, the corpse is still for sometime capable of activities of divers orders: there is some inconvenience in studying the corpse of individuals dying from disease because they are only submitted to anatomical investigations twenty-four hours after death; but those of criminals which are given up to the learned a few minutes after execution might serve for the study of that which takes place immediately after the arrest of the living machine. On opening the heart some minutes after execution, the beatings which persist for more than an hour to the number of forty to forty-five by the minute are observable notwithstanding that the liver, the stomach and the intestines have been removed. For many hours the muscles retain their excitability, evincing reflex contractions under the influence of pinching. M. Robin ascertained on the body of a criminal an hour after his execution the following phenomenon: "The right arm," said he, "was extended obliquely on the side of the trunk, the hand at about twenty five centimetres outside of the haunch, I scraped the skin of the chest with the point of a scalpel to the level of the areola of the nipple to an extent of ten centimetres, taking care not to exercise any pressure on the subjacent muscles. We saw immediately the grand pectoral muscle, then the biceps, the anterior brachial, &c., contract themselves successively and rapidly. The result was a movement of approach of the entire arm towards the trunk with rotation of the arm inward and a demiflexion of the fore-arm on the arm; true movement of defence which projects the hand to the side of the chest, just to the hollow of the stomach."

These spontaneous manifestations of life in corpses are nothing when compared with those which one provokes by means of certain exciting agents, particularly electricity. Aldini in 1802 submitted to the action of an energetic pile two criminals decapitated at Bologna; under the influence of the current the muscles of the visage contracted and produced horrible grimaces. All the members of the corpse were seized with violent movements. The corpse seemed to evince a commencement of resurrection and a wish to raise itself. The springs of the economy had many hours after decapitation the power of responding to the electric excitations. Some years later at Glasgow some equally famous experiments were made on the body of a culprit who was kept suspended from a gibbet during more than an hour. One of the poles of a pile of 700 couples had been placed in communication with the spinal marrow below the place of the nape and the other pole with the heel, the leg previously folded in on itself, was darted with violence and just failed to knock down one of the assistants who was maintaining it with effort. One of the poles having been placed on the seventh rib the other on one of the nerves of the neck, the chest elevated itself and lowered, and the abdomen evinced a similar movement, just as what happens in respiration. One nerve of the eye having been touched at the same time that the heel, the muscles of the face contracted themselves. Rage, horror, despair, anguish and frightful smile united their hedious expression on the face of the assassin.

The most remarkable fact of momentary reappearance of vital properties, not in the whole organism but in the head only, is the celebrated experiment proposed by Legallois and realised for the first time in 1858 by M. Brown-Sequard. This able physiologist decapitated a dog taking care to make the section a little below the place where the vertebral arteries penetrate their osseous canal. About ten minutes after, he applied Galvanic current at different points of the head just separated from the body. No movement was produced. Then he adapted to the four arteries, the extremities of which were seen after section of the neck, small syringes communicating by tubes with a reservoir full of fresh and oxygenated blood, and he thus caused the blood to penetrate into the vessels of the brain. Immediately disorderly movements of the eyes and of some muscles of the face appeared, then harmonic and regular contractions, as if directed by the will, were evinced. This head recovered signs of life. During a quarter of an hour that the injection of the blood in the cerebral arteries lasted the movements continued to accomplish themselves. On the arrest of injection the movements ceased, and then came the tremblings of agony and then of death.

Physiologists have asked themselves if this momentary resurrection of vital properties cannot be realised in man, that is to say, if one be not able by injecting fresh blood in a recently separated human head to provoke some movements and to re-ignite the look as in the experiments of M. Brown-Sequard. Some have thought of trying this on the heads of those executed by decapitation but the anatomical observations and specially those of M. Charles Robin have demonstrated that in cases where the arteries of the neck are truncated by the guillotine in such a fashion that the air can penetrate and fill them, it is impossible to practise there an injection of blood capable of producing the results noted by M. Brown-Sequard. One knows in effect that the blood which circulates in these vessels becomes from contact of air spumous and improper to maintain the functions. M. Robin thinks that the experiment in question might succeed on the head of a man killed by balls having struck at a place below the neck. In such a case it would be be possible to make a section of the arteries without allowing an irruption of air therein; and by separating the head at the place indicated by M. Brown-Sequard one probably might obtain by the injection of oxygenated blood, the functional manifestations observed on the head of the dog. M. Brown-Sequard is convinced that one might obtain by observing certain precautions the same results even with the head of one executed by decapitation, and he was so much convinced of it, that when one proposed to him to perform the experiment, that is to say, to practise injection of blood into the head of an executed criminal, he refused, not being willing, said he, to be witness to the tortures of the stump momentarily called to sensibility and to life. We understand the scruples of M. Brown-Sequard, but we take leave to doubt that he could have inflicted great tortures to the head of the executed; he would have revived a sensibility most obscure and most confused. This explains itself. During life the least perturbation of the cerebral circulation is sufficient to completely pervert sensation and thought. Whereas a few drops of blood more or less in the brain of an animal in full health suffice to alter the regularity of its psychic manifestations, how much more strongly will the same be compromised if the cerebral functions are revived by an injection of strange blood, an injection necessarily impotent to make the blood circulate with an equable pressure and convenience.

Cadaveric rigidity is one of the most characteristic phenomena of death. This is that general induration of the muscles such that they become inextensible at the points of the articulations, and can no more be flexed: this phenomenon commences a few hours after death. The muscles of the jaw stiffen the first; then the rigidity invades successively the abdominal muscles, the muscles of the neck, and last of all the thoracic muscles. This induration is occasioned by the coagulation of the albuminoid semi-liquid matter which constitutes the fibres of the muscles even as the solidification of the blood has for its cause the coagulation of the fibrine in it. After some hours the coagulated musculine becomes again fluid, the rigidity ceases and the muscles relax themselves. It produces also something analogous in blood. The globules are altered and deformed evincing a commencement of dissociation. The agents of putrefaction (vibriones and bacterias) prelude their work by a secret disaggregation of the most secret parts.

In fine, when partial resurrection has become impossible, when the last spark of life is extinguished and when cadaveric rigidity has ceased, a new work begins. The living germs which have been accumulating on the surface of the corpse and in the interior of the digestive tubes, develop, multiply, penetrating all the points of the organism and there working a complete dissociation of the tissues and humours; this is putrefaction. The moment when it appears varies with the causes of death and with the degree of external temperature. When death has been a sequel of a putrid malady, putrefaction is established nearly as soon as the corpse is cold. It is in the same manner when the atmosphere is hot. Generally putrefaction becomes apparent, in our climate, at the end of about 38 to 40 hours. It is on the skin of the belly that one observes the first effect: it takes a greenish colouration which soon extends and gains successively all the surface of the body. At the same time the humid parts, the eye, the interior of the mouth, begin to corrupt, to soften: then the cadaveric odour develops itself little by little, at first dull and lightly fœtid (odor of mould) then pungent and ammoniacal. By degrees the flesh sinks and becomes infiltrated, and the organs become incognizable. All is invaded by what one calls the putrid state. If at this moment we sit down to examine the tissues with a microscope we no more recognise any of the anatomic elements of which the organic woof was in its normal state composed. "Our flesh," writes Boussuet in his funeral oration on Henrietta of England, "changes soon in nature, our body takes another name, even that of the corpse, because that it demonstrates to us still some human form, lasts not for a long time. It becomes one I know not what, which has no name in any language." When all structure has disappeared there remains of it no more than a mixture of saline matters, of greasy matters, and of protein matters, which are either dissolved and drawn along by the waters, or are burnt slowly by the oxygen of the air, and transformed into a number of products, and little by little all the matter of the corpse minus the skeleton returns to the earth from whence it had come. Thus it is that the ingredients of our organs, the chemical elements of our body revert to clay and dust. From this clay and from this dust incessantly emanate new life and powerful activities; but one can extract cement out of it fit for the most common uses, and, as said Shakspeare in Hamlet, the dust of Alexander or Cæsar has been able to serve to plug a bung-hole of a cask of beer or to repair the hole of a wall. These "vile uses," of which the Prince of Denmark spoke to Horatio, mark the extreme limits of transformation of the material. In all cases the lowest animals which work and multiply in the bosom of putrefaction, absorb and really put vitality in store, since without their intercession, the corpse cannot serve for the food of plants, which in their turn are the necessary reservoir from which animality draws strength and energy. It is in this sense that the doctrine of organic molecules of Buffon is true.

Death is the necessary termination of all organic existences.

One can hope to put back more or less the inevitable moment, but it would be insensate to conceive, in any case whatsoever, an indefinite adjournment. Without doubt it is not contradictory to imagine a perfect equilibrium between assimilation and disintegration such that the economy would be maintained in an eternal health. At all events, no one has yet even caught a glimpse of the means of realising such an equilibrium, and death remains until further orders an absolute law of destiny.* Nevertheless, if immortality of a complete organism appear chimerical, the immortality of a separated organ may not be so, and behold in this sense. This has already been the very subject of the experiments of M. Paul Bert on the grafts of animals. M. Bert has demonstrated that we can engraft on the head of a rat certain organs of the same animal, the tail for example. Therefore has this physiologist raised the question, if it would not be possible, when a rat provided with such an appendage approaches the term of its existence, to remove this appendage and to transplant it on a young animal which in its turn would be dispossessed in the same fashion in his old age in favour of an individual of a new generation, and so on. This tail, successively transplanted on young animals and drawing in each transplantation a blood full of vitality, renewing itself constantly without ceasing to exist, would thus escape from death. This experiment difficult and delicate, as it is easy to conceive, has however been undertaken by M. Bert, but circumstances not permitting to carry it on for a long time, the possibility of perpetuating an organ periodically renewed remains to be demonstrated.

III.

Real death therefore is characterised by the definite arrest of the functions and the vital properties, at the same time of organic or vegetative life and of animal life properly so called. When animal life disappears without there being interruption of organic life, the economy is in a state of apparent death. In this state the corpse takes to a profound slumber much analogous to that of the hibernating animals: all the ordinary expressions and all the indices of internal activity have disappeared and have given place to an invincible torpor. The most energetic chemical stimulants exercise no influence on the organs, the thoracic wall is immoveable; it is impossible to see the corpse in this state and not to think of death. The states of the organism which could thus more or less simulate death are numerous; the most common is *syncope*. There is no more in this case either any sentiment or respiratory or circulatory movements apparent; the heat is abated, the skin is discoloured and livid. Some cases of hysteria may be cited in which the attack was prolonged to several days with accompaniment of syncope. In this singular state all physiological manifestations are suspended but not so completely as we have believed for a long time. M. Bouchut has demonstrated that in most grave syncopes the beating of the heart persists, more feeble, more rare and more difficult to listen than in normal life, but clearly perceptible when one applies his ear to the pericordial region. On the other hand the muscles conserve their suppleness and the members their flexibility.

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* Krishna has very truly said in the Gita, that the sole aim of all existence is to be extinct, persons are born that they may have the privilege to die.—*Trans.*

Asphyxia, which is properly the arrest of respiration and consequently of the revivification of blood, at times as a sequel of a grave syncope, is followed by apparent death from which the victims revive at the end of a time more or less long. This state might be determined either by submersion or by absorption of an irrespirable gas, such as the carbonic acid of the bottom of wells, exhalations from water-closets and pits, and fire-damps of mines, or by strangulation. In 1650 they hanged at Oxford a woman of the name of Anne Green. She had been hung during a half hour, and many persons with a view to abridge her sufferings had pulled her with force by the leg. After they had put her in the coffin they perceived that she still respired. The assistants of the executioners wanted despatch but thanks to the assistance of some doctors she came back to life and lived for a long time more. Submersion determines a syncope not the less profound, and during which, curious to note, psychic faculties conserve a certain activity. Seamen drowned and afterwards retaken in time have recounted that during their submersion they were transported in idea to their family and had contemplated with melancholy the grief of which their death was going to be the cause. After some moments of psychic calm they had evinced violent achings of the heart; this resembled twisting in their chest, then to this anguish succeeded a complete annihilation of the spirit. Besides, it is difficult to fix the length of time to which apparent death may prolong itself in a submerged organism. This varies a great deal with temperaments. In the islands of the Grecian Archipelago, of which the industry consists in collecting sponges from the bottom of the sea, the children drink wine only when by practice they are habituated to rest a certain time under water. The elderly plungers of the Archipelago say that the moment of their coming to the surface to breathe is indicated by painful convulsions of the members and a most painful retightening of the region of the heart. This faculty of enduring asphyxia a certain time and, in voluntary suspension, of resisting the respiratory movements, have been observed under other circumstances. One cites the case of a Hindu who used to slide under the place railed in the Hugli where the ladies of Calcutta go to bathe, and seizing one of the ladies by the leg to drown her and to despoil her of her ornaments. People thought she was carried away by some crocodile. A damsel having succeeded to escape him they seized the assassin who was hanged in 1817. He avowed that for seven years he had practised this business. Another case is that of a spy who, seeing his excution about to be ready, attempted to avoid it by simulating death. He suspended his respiration and all voluntary movements for twelve hours and bore all the tests to which he was submitted to make sure the reality of death. Finally anæsthetics, such as chloroform and ether, sometimes produce more serious results than the surgeons who make use of them would wish, and bring, in lieu of a passing insensibility, a state of apparent death.*

It is easy to recal to life individuals who are found in a state of apparent death; we have but to excite energetically the two mechanisms, to wit, of respiration and of circulation, of which the action is more or less suspended. We have but to impress upon the thoracic cavity such movements that the lungs may be alternately compressed and dilated.† Some practice (like the Hindus) a species of shampooing on the corpse, which reanimates the capillary circulation. Some place under the nostrils of the patient chemical excitants, such as ammonia, or acetic acid It is thus that one treats the drowned, who are sick not for having absorbed much water but for having ceased to respire air. A treatment most efficacious in the case of apparent death due to an inhalation of intoxicating gas, such as the carbonic acid or sulphuretted hydrogen, consists in making the patient absorb large quantities of pure oxygen. Lastly, one has proposed quite lately again, as Hall had done at the commencement of this century without result, to adopt the employment of strong electric currents for rousing the movements of individuals in the state of syncope.

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* The singular phenomena. which the animals called reviviscent present, are very like those of apparent death. These animals might be brought to a state of almost complete dessication losing all appearances of life, but might be made to recover their vitality by a simple immersion in water. Plunged in a humid medium the reviviscent animals cannot bear a temperature superior to 50° centigrade, but when they have been deprived of their physiological movements by dessication in free air, they can without losing this property of reviviscence resist for some moments a temperature of 100° centigrade. The principal reviviscent species are the eel-ules (anguillules), the tardigrades and the rotifers. These last live in humid moss, they can be dried without perishing : they roll themselves up into balls during dryness and retake to movements when they can. All these beings are however microscopic.

[We only cite without giving to it the stamp of our authority the case of the Hindu who suffered to bury himself for some days, and when exhumed came back to life after some time.—*Trans.*]

† This is what is called artificial respiration. Since sometime on the indication of M. Grehant apparatuses have been constructed which are well calculated for commodiously practising artificial respiration by means of insufflation of air.

In all cases of apparent death which we have described a character of vitality persists, and this is the beating of the heart. These beatings are more feeble, more rare, but appreciable by auscultation. It has certainly been found in the most grave syncope, in divers sorts of asphyxia, in hysteria, in the torpors of epilepsy, in short, in all the states the most varied and the most prolonged of apparent death and of lethargy.

Nevertheless the result now acquired by practice was unknown to the ancient physicians and one cannot deny that in other times apparent death has been taken very frequently for real death. The annals of science have registered a certain number of confusions of this kind of which several have had for their sequel inhumation of some unfortunates who were not dead. And for one of these errors which accident has discovered, whether too late or at the moment when the victim could still be saved, how many there were in the epocs of ignorance and carelessness, we do not know. How many of the living have raised their last sigh but after having vainly essayed to break their coffin. The facts, collected by Bruhier and Lallemand in two works which have become classic, compose the most dramatic and the most doleful history. Here are some sufficiently singular episodes out of the list which have played with danger. A field watch without family died in a small commune of Charante-Inferieure. Barely after his corpse was cold he was removed from his litter and was deposited on a straw mattress covered over with a black shroud. A paid old woman was charged to watch the death-bed. Towards the feet of the corpse was placed a branch of the box-tree plunged in a vase filled with holy water and a lit candle was placed by its side. Towards the middle of the night the old woman giving in to an insurmountable need of repose fell into a profound slumber. About two hours after this she awoke in the midst of incendiary flames which had gained her vestments. She sprang up out side, called with all her might for succour and the neighbours running to her cries soon saw in the inflamed ruins a naked spectre dragging himself with pain on his legs covered with blisters. During the repose of the old woman a spark having probably fallen on the straw mattress had developed the incendiary fire and at the same time that it recalled the woman from her slumber, revivified the village watch from his apparent death. Helped in time he was soon cured of his blisters and came back to health.

On the 15th of October 1842 a cultivator of the environs of

Neufchatel (Seine-Inferieure) mounted on a hay loft above his granary for sleeping as was his custom in the midst of the hay. The following morning, the habitual hour at which he rises having passed, his wife wishing to know the cause of this delay went over to the place where she found him dead. More than 24 hours afterwards, the time for interment having arrived, the porters charged with his sepulture deposited the corpse in a bier which was then closed. They then slowly descended, carrying the coffin, down the ladder which had served them to mount on the granary. All of a sudden a rundle of the ladder suddenly broke and the coffin and the porters were seen to roll down together. The coffin broke open in the fall. This accident which would have been fatal to a living was salutary to the dead, who awoke from his lethargy by the commotion and came back to life, earnestly disembarrassed himself from his shroud with the aid of such assistants as had not taken to flight by his sudden resurrection. An hour after he recognised all his friends, complained of a slight embarrassment in the head, and on the following day he was in a state fit to take to his work. Just at this time an inhabitant of Nantes succumbed to a long illness. His heirs were making a magnificent interment and when a requiem was being chanted the dead came back to life and agitated himself in the coffin which was placed in the middle of the church. He was removed from that place and soon recovered health. Sometime after the parish priest who would not like to lose the price of the funeral addressed a note to the *ex-mort* who refused to pay and referred back the priest to those heirs who had ordered the funeral. Whereof ensued a law-suit which served a subject for much diversion in the newspapers of the time. Cardinal Donnet has himself recounted to the senate, some years ago, the circumstances under which he failed to be interred alive.

By the side of these facts of precipitated inhumation where the victim escaped the frightful consequences of the error committed, there are others where the error was recognised but too late. There are numerous examples of this kind known, of which some have details too romantic to deserve our faith. Some however present incontestable characters of authenticity. A tradition, of which it is sufficiently difficult to assign the origin, has for a long time attributed the death of Abbé Prévost to an error of this kind. All his biographers relate that struck by an apoplectic fit and falling unconsciously in the middle of the forest of Chantilly the celebrated author of *Manon Lescaut* had been considered as dead, and that in consequence of a Chirurgeon of the village having opened his entrails on the order of the public officer with a view to find out the cause of his death, Prévost uttered a cry and then expired; but it has been since proved that this recital is apocryphal and that it has been invented subsequent to the death of Abbé Prévost, and none of the necrological documents published at the time attribute his death to a premature autopsy. However unreliable the history of Prévost having been dissected alive may be; it is not the same though of the one recounted of the operations of a celebrated accoucher, Philippe Peu. A woman at an advanced stage of pregnancy was in a state of apparent death. Called to perform the cæsarian operation, Peu reported that the assistants being convinced that the woman was dead pressed him to operate. "I also believed it," said he, "because I had found no beating in the region of the heart and a mirror being placed on the visage it gave no sign of moisture." Then he plunged his knife in the flesh and it was in the midst of the bleeding tissues when the operated woman awoke from her lethargy.

But behold the facts most stirring. About 30 years ago an inhabitant of the commune of Eymes (Dordogne) was taken up with a chronic malady of which the most painful symptom was a continued sleeplessness which deprived the patient of all rest. Fatigued by this state he consulted a physician who prescribed for him opium, recommending him to use it with caution. The sick man embued with the common prejudice, that a medicament acts the better the larger the dose swallowed at a time, took at one time the dose of many days. Soon he fell into a profound slumber from which he did not rise for more than 45 hours. The doctor of the village was called in, who found the corpse without heat, the pulse extinct. This practitioner successively opened the veins of the two arms and obtained but a few drops of thick blood. On the morrow they proceeded to the inhumation. However at the end of some days new informations discovered the imprudence which the unfortunate had committed in using in excess the narcotic substance which had been prescribed. A dull rumour manifested itself amongst the inhabitants of the commune which demanded and obtained exhumation. The people went in a crowd to the cemetry, they took out the coffin, they opened it, and the most hideous spectacle presented itself to the assistants. The unfortunate was turned up in his bier, the blood which had flowed from the two opened veins had bathed his shroud, his features horribly contracted, his limbs were crisped, attesting the cruel agony which had preceded his death. Most of the facts of this order are of too distant a date. The most recent have taken place in the country in the midst of ignorant populations and generally in localities where no doctors are charged to verify the decease, that is to say, to distinguish cases of apparent death from those of real death.

How therefore to distinguish apparent death from veritable death? There is a certain number of signs of certain death, that is to say, of characters which positively verified leave no room for error. Nevertheless some doctors and still more persons who are strangers to science still doubt the reliability of these signs, hoping that physiology might discover others of a more sure character. A zealous philanthropist has founded quite lately a prize of 5000 francs to award to the author of the discovery of an infalliable sign of death. Certainly the intention is excellent, but one can henceforth consider without fear the work of the grave diggers: the signs actually known are sufficient to prevent all error and to render impossible the sinister danger of premature inhumation.

It is necessary to distinguish the immediate signs of death. The first and the most decisive is the definite interruption of the beatings of the heart, proved during five minutes at least, not with the hand but with the ear. "Death is certain," said the reporter of the Commission nominated in 1848 by the Academy of Sciences to act as judges in the competition relative to the signs of real death, "death is certain when one has proved in man the definitive cessation of the beatings of the heart which immediately follows and is not preceded by a cessation of respiration and by that of the functions of sentiment and of movement." The distant signs are not the least deserving of attention. There are three considerations; cadaveric rigidity, resistance to the actions of the galvanic current, and putrefaction. As we have seen, cadaveric rigidity commences a few hours after death, the general and total abolition of muscular contractility under the influence of currents, and finally putrefaction is manifested but at an epoc still more late. These distant signs and above all the last have the advantage of being attestible by persons strangers to science, and one will do well to take care in the country where the verification of decease is not confided to the physician, but has no more importance where there are doctors for auscultimg the heart and concluding death with certitude and promptitude by the absolute cessation of the beatings of that organ. At the commencement of this century Hufeland and several other practitioners, convinced that all the signs then known of death were uncertain save that of putrefaction, had proposed and obtained in Germany the creation of a certain number of mortuary houses destined to receive and conserve for sometime the corpse of the deceased. Since the establishment of these asylums and the authentic declaration of doctors one has never seen a corpse transported to this place come back to life. The utility of these mortuary houses is however contestible at the present day when we possess positive and immediate means of recognising real death. The measure of Police which interdicts autopsy and inhumation before complete expiration, a delay of 45 hours from the moment of the declaration of death, remains however a sage precaution but it takes away not a particle of certitude from the testimony furnished by the arrest of the heart. When the heart has definitely ceased to beat, there is no more of resurrection possible, and life which it abandons disposes itself to enter in a new cycle.

Hamlet, in his celebrated monologue, talks of "the country undiscovered of which the frontier has been repassed by no voyager," and he melancholily demands of himself what are the dreams of the man to whom death has opened the gates of the place of darkness. One could not in the name of physiology respond with greater certainty than the Shaksperian personage. Physiology is mute on the destinies of the soul after death. She teaches us nothing. She can teach us nothing. It is evident and it must be puerile to deny that all psychic or affective manifestations and all concrete representations of personality are impossible after death. Dissolution of the organism certainly and necessarily annihilates sensitive, motive and volitive functions which are inseparable from a certain assemblage of material conditions. One can no more feel or wish but so long as one has the organs of reception, transmission and execution. These affirmations of science are indisputable and must be accepted without reserve. Do they instruct us of the destinies of these psychic principles? Again, we say, no! and for this very simple reason that science has not attained to these principles; but metaphysics which has attained them authorise us, nay oblige us, to believe that they are immortal. They are immortal as the principle of movement, as the principle of perception, as all the united activities of the world. What are those which characterise these unities in general? They are simple existences, that is to say, indestructibles; they are the beings in harmonic connection the one with the other in such a fashion that each perceives the infinite order of the other. If this connection existed not, there would not be the world. What is that which characterises the psychic unities in particular? It is that of having besides the consciousness of such a perception, the sentiment of affinity which binds all and the faculties more or less developed which this consciousness and this perception imply. Or why should these unities be more perishable than the others? Why, if all the forces, all the activities are eternal, these alone should be without eternity which have this noble privilege, viz., the consciousness of these infinite affinities which the others support without the knowledge?

In order to conceive the immortality of the soul, it is necessary to place oneself in this point of view of the simplicity and indefectibility of all the principles of energy which fill up the universe, a view to which man rises up but with difficulty. It is necessary to habituate ourselves to understand that what we see is nothing compared to what we see not. All force, all the springs of the most complicated movements, the most grand phenomena of nature and the most delicate operations in life, including thought, proceed from the infinite admixture of an infinity of series of inextended and bound-up principles of which the activities from simple motive principles to the supreme reason go on perfecting themselves. Human personality, such as we know her and see her, is no more than the complex and total resultant of those of the primitive activities which are more profound and the better for ourselves. It is not that one which is immortal—she is so no more than the motive force of the steam-engine or the electricity of a pile of Volta, whilst however the movements of electricity are by themselves indestructible. It is not that one which can aspire to the bosom of God. Our true personality, our true ego, the one which can without illusion trust on a future life, is the unity disengaged of materiality and of all concrete alloy; it is energy manifestly simple, which has more or less clear consciousness of its own affinity with the infinity of similar unities and which approaches them more or less by thought and love. It is impossible for us to represent what will become of the life of this unity the day when quitting its carnal prison and gaining the ethereal ideal, she will have no more organs to act: but what we can affirm is that precisely on that account she will elevate herself to more clear science of that she had obscurely seen, and to a purer dilection of that which she had adored but through the veil of her senses. And this certainty, which is ennobling of life, is also the consolation of death.

NOTE BY THE EDITOR.

It is due to ourselves to tell our readers that we do not subscribe to the opinions expressed in the last two paragraphs of this otherwise excellent Essay. The author begins by saying, "Physiology is mute on the destinies of the soul after death. She teaches us nothing. She can teach us nothing." But singular to say, he forgets at once in the next sentence what he thus lays down as the *ultima thule* of physiology. Notwithstanding that his physiology teaches and can teach him nothing, yet he must affirm, that "it must be puerile to deny that all psychic or affective manifestations and all concrete representations of personality are *impossible* after death," and further that these affirmations of science (falsely so-called?) are indisputable and *must* be accepted *without reserve*." It excites at once our pity and our smile to see how this man of science indulges in the wildest speculations to support a foregone conclusion, at which he has arrived, as he himself tells us, not by the path of his own science—physiology, but which, nevertheless, he feels bound to support by a sort of metaphysical physiology of his own invention. He denies the immortality of the "human personality, such as we know her and see her," which, as the resultant of the primitive activities, is no more immortal, says he, than the motive force of the steam-engine, or the electricity of the voltaic pile! He sees that he thereby robs man of his only consolation in death, and straightway substitutes a fictitious one in its place. He claims immortality for these primitive activities, among which he numbers what he calls "psychic unities," which have the noble privelege of having the consciousness of its infinite affinities with the other unities in the universe. M. Papillon does not tell us by what process, of induction or of deduction, has he arrived at the fact of the existence of these his "psychic unities," which therefore we must look upon as pure inventions. Again, though he says he cannot tell what will become of the life of these unities after death, when they will have no more organs to act by, yet he "can affirm that precisely on that very account" they will be elevated to a higher existence, and possess a clearer knowledge and enjoy a purer love. And this dream is presented to us as a *certainty*, "which is ennobling of life, and also the consolation of death." We cannot, and we believe the majority of mankind will not, rise to this view of things, even with "difficulty." The philosophic immortality of the psychic and the other "unities," *without* the immortality of the "human personality," may afford strange consolation in death to a few philosophers who, moving out of their legitimate grooves lose themselves in the wildest vagaries, unwarranted by science according to their admission, but it can never afford any consolation to the mass of unsophisticated human nature. Unsophisticated human nature will always reason from the positive facts of consciousness, in other words, of the "human personality," and will never allow the unknown to disturb the known. It is perfectly true, as M. Papillon lays it down, that the unknown is infinitely greater than the known. But he should have remembered that the unknown is unknown, and then he should not have indulged in idle speculations regarding it.

A MORIBUND VINDICATION OF RATIONAL MEDICINE.

Our contemporary of the *Indian Medical Gazette* has, in his current (May) number, in an article under the title "Moribund Medication," which for the edification of our readers we have quoted entire under our *Gleanings,* indulged in certain reflections which as affecting directly certain general principles, or feelings if you like, and indirectly homœopathy, we cannot allow to pass unnoticed. The logic of the article seems to us to be as questionable as the English of its title. We cannot, however, presume to judge of the correctness or otherwise of a foreign language. We must therefore content ourselves with discussing the correctness or otherwise of the arguments.

The drift of the article is no other than an ill-concealed attack upon homœopathy. It is doubtful if the learned Editor would have deemed it necessary to trouble his pen with "moribund medication," if instead of the medicines of a homœopathic practitioner, those of a Kaviraj or a Hakim, or even of a veritable charlatan, had been reported to have wrought miracles in the last days of the late Raja Kali Krishna Bahadur. It is not a little curious, which a slight acquaintance with controversial medical literature of the day shows, that the members of the orthodox profession, although they may and do differ from each other in almost every particular regarding the treatment of every disease, are singularly unanimous in their denunciation of homœopathy. The opposition to the new system is characterised by a bitterness and a malignity which is surprizing in men who profess themselves votaries of science, and members of a profession which should above all be animated by the highest charity. And what is most strange is that the bitterness and the malignity of the opposition are increasing in proportion to the progress the new system is making, in proportion to its encroachments upon the domain of the old, in proportion to the surreptitious and unacknowledged use of its armamentaria by unscrupulous practitioners of the opposite side. It bespeaks not a little the ignorance, jealousy, prejudice, and inexcusable intolerance of orthodoxy, that while homœopathy as a distinct and separate system has unfolded its banners all over the world, while one of its fundamental doctrines, the necessity of the proving of drugs in health, has begun to be recognized as indeed the very fundamental necessity of therapeutics by the very heads of the profession and while its other fundamental doctrine, the *similia similibus* law, is being recognized as at least one of the laws of therapeutics, the opposition of, what in want of a better term we must call, the mob of the profession should still continue so strong, that even the thoughtful heads should quail under their influence and hesitate to give that full and free expression to their opinions which is demanded by conscience and by truth.

We do not lament, however, the simple fact of opposition. Opposition is of use in medicine, as in politics and religion. In the imperfect state of knowledge, which must be the condition of knowledge of all finite beings, there must be opposition if there be earnestness and genuine thirst after knowledge; and opposition, in such a condition, is a powerful engine for the discovery and rectification of error, and even for the discovery of truth. For "truth like a torch, the more it's shook the more it shines." But opposition then is of most use, when it is honestly conducted,—it is then of use to both the opposing and opposed parties. It then creates a healthy vigilance on the part of both, whereby both attempt to avoid the shoals and quicksands of error, and attain the harbour of truth. But when opposition proceeds from other motives than that of the discovery of truth,—from interest, from prejudice, from jealousy, from the mere spirit of opposition, then its true function is destroyed, then it is almost absolutely useless to the opposing party, as the very fact of its being actuated by an impure motive shuts up all the avenues of conviction. And being by its very nature irritating and disgusting to the party opposed, such opposition is ill calculated to produce its salutary effect upon this party.

Nevertheless we prefer opposition proceeding from whatever motive to apathy and indifference. There is hope of improvement under the former state of mind, none under the latter. For if opposition does nothing else, it at least keeps the mind astir, and mental activity is infinitely better than mental stagnation. It was therefore not without some pleasure, and even not without some thankfulness, that we perused the article under notice, as giving us an idea of the point of view from which homœopathy is looked at by the learned Editor, and as thereby giving us an opportunity to tell him that we did not expect such a mistaken view of a system which has revolutionised modern medicine from a gentleman of his information and judgment. We did not expect that he should put in the same category with "irrational," with "transcendentalism and mysticism," with "prayers, charms, and incantations," a system which has drawn and is daily drawing into its ranks men of acknowledged ability and honesty in the profession, men who have to desert their old ranks not only at the risk of professional ostracism and of loss of reputation, but even of starvation. We are constrained to say we did not expect this ignorance or rather this ignoring of the merits of a system, the least of which ought, according to his own admission, to be the highest aspiration of rational medicine, namely to "refrain from aimless and irritating death-bed therapeutics."

In the face of the prevailing ignorance and the consequent prejudice and intolerance displayed by the mass of the profession regarding it, we are quite willing to pass over and excuse our learned contemporary's unfair treatment of homœopathy. But we cannot thus pass over and excuse, indeed, we must take leave to protest against, his most unfair treatment of the tenderest feeling and the strongest instinct of our nature. In spite of the most positive declarations of "rational medicine," and in spite of its strong but melancholy assurances of "no hope," men and even rational medicine men will, in the hour of the sorest trial that can befal humanity, continue to act on the principle, or if you like, on the strength of the feeling, "while there is life there is hope." And the reason is not far distant to seek. There may in reality be no hope while there is life. But if there is any possibility of hope it is only so long as there is life. Hope must become extinct with life. And must we, on the strength of our boasted or fancied infallibility of prognosis, deter men from trying other means than ours when we have failed to arrest the progress of disease, and the consequent final inevitable—death?

To what, we should like to ask, did medicine, even the much vaunted "rational medicine," owe its present advanced state? An impartial historic review returns an answer which is not very creditable to Reason itself. For it must be acknowledged that the advancement of medicine has been due little, very little to the deductions and inductions of Reason, but primarily and chiefly to the energy of the instinct which our learned contemporary would fain smother in order to maintain the honor and dignity, or as we should rather say, save at any cost the reputation of "rational medicine," and vindicate his most cherished "rational faith" therein.

But what flimsy arguments are advanced by our worthy contemporary in support of his views! The very instance cited to illustrate "irrational death-bed interference" is suicidal, and leads to a conclusion the very reverse of what was aimed at. What would have been the fate of the cabin boy if the Captain, in full reliance upon the hopeless verdict of the practitioner of rational art, had not thought of the huge mustard plaster? This interference might have been "irrational," but did it not save a life? and instead of laughing at it, ought not rational medicine to take serious lesson from it? In our humble opinion it is not only absurd and unphilosophical, because opposed to the humility of true science, but criminal and cruel, because opposed to the dictates of conscience and humanity, to ask or wish people to remain idle spectators of the steady march of death without endeavouring to arrest it by remedies unknown to ourselves, but which others might know, simply because we in our pride or in our fear deem or brand such a course as "irrational interference." If medical science teaches anything it is our fallibility at every step, evidenced by the daily falsifications of our diagnoses and prognoses, and by the numberless failures of our therapeutics. The true mission of our profession, therefore, imperatively demands that the moment we find *our* resources exhausted, and ourselves, in consequence, unable to successfully cope with disease, we should deem it our first duty to announce the fact to those interested in the case, not that they should limit their efforts to simply "smoothing the pillow of their doomed relative," but that they might try other remedies, and, in fact, leave no stone unturned, for the saving of life or the relief of suffering. Is the prolongation of life even for a day of no moment? Is the relief of suffering nothing?

In the case of the late Raja Kali Krishna Bahadur, which has furnished our contemporary with a text to preach up "rational faith," and a pretext to cry down homœopathy as irrational, transcendental, and mystical, no better if not worse than charms and incantations, the testimony of relatives and friends is that Babu Loke Nath Moitra's medicines "wrought miracles for three days." We have had this testimony verified, and the friends and relatives, whom we could not possibly suspect as having lost their reasons, are as strong in their asseveration now as when they reported the matter immediately after the Raja's death. After the use of Babu Loke Nath's medicines improvement had set in, and relief from suffering was obtained, when none were perceptible under "rational medicine." Was this nothing? Why could not the practitioner of rational medicine, "the man of science and skill," bring about this improvement and this relief before giving up the case as hopeless? We need hardly say that we do not believe, nor indeed did those, who said so, mean that the Babu's medicines did literally work "miracles." What was meant was that what these medicines did, compared to what rational medicine did (or rather could not do) before, was miraculous.

We cannot help remarking that it is a matter of no small wonderment, and were it not serious, we should add, amusement, that our contemporary has not been struck with the ludicrously irrational character of the picture he has himself drawn of "rational medicine," and of its rational practice by "men of science and skill." The spirit of language must change, the very signification of words must be reversed, before we or any body can believe with our contemporary that they are "practitioners of rational medicine," "who often feel compelled to order ammonia, mustard, brandy, &c., *without* much *reason*," that the faculty, "the moribund medication of which is often meddling and annoying, nay cruel," by which "the last moments of a dying man are rendered less calm and peaceful than they otherwise would be," is the faculty which must be acknowledged to have the monopoly of rational medicine. If rational medicine has no better claims upon our belief, and if its faculty and practitioners in general have nothing better to show to command our respect, than what has been pictured by our contemporary, then we must despair of their longer hold upon the community, at least we must bid them farewell. We would rather be irrational *with* reason, than rational *without* reason. We would rather like to be classed with the transcendental and the mystic for dealing in medicines which have a definite aim and which from their quantities cannot be injurious, than aspire to the sublime title of "the man of science and skill" "by the desperate use of blisters, electricity, brandy, beef-tea, turpentine, *et hoc genus omne*," which, being "aimless and irritating," prove "meddling and annoying, nay *cruel*."

ON THE WORK OF A MEDICAL OFFICER OF HEALTH, WITH ESPECIAL REFERENCE TO THAT OF THE HEALTH OFFICER OF CALCUTTA.

The animated debate reported to have taken place in one of the recent meetings of the Justices of the Peace for the Metropolis of British India, furnishes further facts in corroboration of the remark made by Mr. Justice Phear some years ago, that the Municipality of Calcutta was a solemn sham. One of the subjects for determination by that meeting was a proposal of the Finance Committee to the effect that the analytical works of the Justices should be undertaken by the Health Officer. The elucidation of this proposal led some of the Justices to review their past proceedings in reference to the appointment of the Health Officer and the provision made for conducting the duties of analysis. As the work of a Health Officer is, as it were, the pivot on which the whole machinery of a municipal corporation turns, its importance has everywhere been acknowledged, and the greatest care has been taken to regulate it in accordance with the most advanced principles of the science of Hygiene. The following will show how the latter duty has hitherto been performed in Calcutta.

The present constitution of the Calcutta Municipality was defined by a legislative enactment passed so long ago as eleven years. That act provided for the appointment of a Health Officer by the Justices, and their Chairman was authorized to determine what duties should be assigned to such an officer. The Justices fixed a very high salary for the appointment, namely, Rupees 1,600 a month, an allowance greater than what has been deemed sufficient by Government for the post of Sanitary Commissioner of the entire country under the Lieutenant-Governor of Bengal. In the United Kingdom, and perhaps in most of the countries on the Continent, there is a standing rule that the Health Officer should be one who has not only received a proper medical education, but who has by his pursuits evinced an aptitude to keep pace with the progress of the science of health and of the collateral sciences. Neither the Government of Bengal, nor the Calcutta Justices, appear to have felt the necessity of paying any attention to such a rule. A special committee, consisting of some of the best men capable of, settling the question, appears to have been appointed to consider and report on the duties of the health officer, but the deliberate opinions recorded by it were set aside by a large majority of the Justices, who, to quote one of their number, thought "that an officer, with sound common sense, strong will and active habits, at the head of the conservancy department, would do all that a professional man was expected to discharge." A Health Officer was accordingly appointed, but his duties were not, at the time, and have never been since, clearly and fully determined.

This health officer (M. Tonnerre) seems to have taken upon himself the duty of confiscating unwholesome articles of food and drink exposed for sale—a duty which presupposes a competency to analyse compound substances. Yet, when in the year 1869, a dispute arose about the quality and quantity of the gas supplied by the Oriental Gas Company, and the absolute necessity of an analyst to the Justices became apparent, the health officer was overlooked altogether, and the duty of conducting the analysis of gas was entrusted to another gentleman—the Government Chemical Examiner—on an additional remuneration of Rupees 150 a month. Then again, when the water works were completed, some arrangement was required to be made for the analysis of water, and this work was also assigned to the chemical examiner. If for this second duty. any fixed monthly salary exceeding 50 Rupees had been allowed, the pay of the analyst of gas and water would have been more than 200 Rupees—an allowance which the Chairman could not authorize without the sanction of the Justices at a meeting. For reasons best known to himself, the Chairman did not however refer the matter to the Justices, and instead of a fixed salary, he permitted the analyst of water to charge fees as contingencies to the amount of Rupees 150 per month. An analyst of gas and water was thus virtually appointed on a monthly salary of Rupees 300, without the sanction of the Justices.

In this way the Chairman acted for years in direct contravention of a law, which he was in duty bound to observe most carefully, and neither the Justices nor the Government appear to have taken any notice of his conduct. At last when Dr. Macnamara left this country about a month ago, and Dr. Palmer was appointed to act as Government Chemical Examiner, the latter gentleman asked Mr. Hogg if he was to take up the duties of gas and water analysis. The Chairman told him "that he could have the appointment of gas analyst on Rupees 150 per month, but that if he wanted Rupees 300 for both the appointments, he must refer to the Justices." At this time, the Chairman's conscience seems to have been smitten at the irregular, if not illegal, course, which he had carried on for years. So at a meeting of the Justices held on the 21st of May last, when a resolution was moved to the effect that the health officer's duties should include the analysis of gas and water, he proposed an amendment, which was not in the list of business (a course which he would certainly not have allowed in the case of any other Justice), to the effect that Dr. Palmer be appointed analyst to the Justices on a salary of Rupees 300 a month. By a mysterious process, evidently well known to the Chairman, the original resolution was lost, in spite of its having emanated from the Finance Committee, and the Chairman's amendment was carried. Up to this time the Health Officer appears to have performed the duty of analysing noxious articles of food and drink exposed for public sale, while the analysis of gas and water was carried on by a different party. Under the resolution thus passed, all analytical work will now be performed by the newly appointed analyst.

Thus, the Health Officer has been relieved of certain duties which appears to have been hitherto performed by him, not because he was overworked, but on account of his inability to perform the same, and yet his salary remains unaltered, a course for which it is difficult to find a precedent in any well-regulated Corporation. But this is not all. Another question remains yet undetermined, namely, under what authority have the Justices appointed a separate analyst? Section 7 of Act VI of 1863 B. C. provides for the appointment of a Chairman by the Lieutenant Governor of Bengal, and the following two sections authorize the Justices to appoint *proper* persons to the offices of Vice-Chairman, of Secretary, Engineer, Surveyor, Health Officer, Collector of Taxes, and of Assessor for the town of Calcutta, while section 13 empowers the Chairman to appoint overseers, clerks, subordinate officers and servants. There is no provision in the Act for the appointment of officers other than these, nor does any of the amending acts provide for new appointments with the exception of Act II of 1872, the 8th section of which gives authority to the Justices to appoint officers for the inspection of jute warehouses. Neither the Lieutenant-Governor, nor the Justices, nor their Chairman can therefore create any office for this town not expressly mentioned in any one of the municipal acts. The appointment of an Analyst, as distinct from the Health Officer, has not been expressly provided for in these Acts. Hence it seems to us that it is not competent for the Justices or any executive officer to appoint a separate analyst for the corporation of Calcutta under the present law.

But we fear we are trespassing upon a ground which legitimately belongs to another profession. It is not for us (medical men) to determine whether an appointment could be created or not under any particular law. That question we leave to competent authorities to settle, and we now proceed to consider another question which should have been previously decided, namely, whether an analyst was really necessary for the corporation in addition to the Health Officer. This question appears to have never been seriously discussed by the Justices. It is only Dr. Palmer, Officiating Chemical Examiner to Government, who has urged upon the Justices the necessity of entrusting their analytical work to a person other than their Health Officer. We agree with him in thinking that the work of analysis, dependent as it is upon a progressive science, can only be best performed by one, who, from necessity of occupation or choice, has to work continually in the laboratory, who is not only well-accustomed to handle chemical appliances, but can keep pace with the progress of chemistry; and that therefore the Government Chemical Examiner, if he is properly qualified for his post, is the fittest party in Calcutta to be the analyst to its Municipality.

If then a separate analyst has been considered necessary, and if the work of analysis has been taken away from the Health Officer, it was but proper that the duties of the latter should have been clearly and distinctly laid down, and his salary revised under the altered circumstances. This has not been done yet in Calcutta, in a way at all commensurate with the present advanced state of the science of health. Those Justices therefore who advocated the appointment of a special committee for the purpose of re-organising the health establishment and of laying down the duties of the health officer, but have been outvoted, exhibited greater wisdom than their Chairman. It will thus be seen that the Chairman has failed to assign proper duties to the health officer, which the law requires of him to do. We are of opinion, therefore, that this part of the law ought to be modified, and that the definition of these duties, instead of being left with the Chairman, should be taken up by Government who, in dealing with questions of such a nature, are sure to abide by the opinions of its medical officers of repute, which latter, we are equally sure, will never advise them to look upon "common sense, strong will and active habits," as the only qualities necessary in a health officer.

CLINICAL RECORD.

A Case of Cholera. Recovery.

REPORTED BY AN L. M. S.

A Hindu lady, aged 25, was attacked at about ½ a. m. on Wednesday, the 25th March. The disease had commenced with diarrhœa and vomiting of undigested food. Her brother-in-law, a medical student, had administered 2 full doses of Pulv. Creta Aromaticus Cum Opio without any effect. At 4 a. m. I was called in great haste and found the patient passing profuse watery stools without color or smell; skin shrivelled and blue; tongue and breath cold; pulse barely perceptible at the wrist; throwing her arms about in great restlessness; complaining of cramps in the region of the stomach and in the calves; voice sepulchral; nose, lips and extremetics cold. There was no vomiting. *Verat.* 3, 2 doses and *Ars.* 3, 2 doses alternately.

6½ a. m. Was doing well, but turpentine having been applied all over her body by her mother at 6 a. m. the symptoms returned with redoubled force. Had 3 profuse stools within half an hour. *Verat.* 6, 2 doses and *Ars.* 6, 2 doses alternately.

9 a. m. Much better; but cramps in the hands, feet, toes and calves distressing, the extensors of the fingers and toes being affected. *Cup.* 6, dose.

9½ a. m. Dr. Sircar was called in. He ordered 2 more doses of *Cup.* 6.

11 a. m. 3 scanty stools from 7 a. m. thicker in consistence but still without any color; cramps not so distressing; abdomen a little flatulent. *Carb. v.* 6, 4 doses.

3 p. m. Extremities warmer; pulse better; no cramps; one loose stool of white color. *Nux v.* 3, one dose.

10 p. m. The same as before; had two very stightly yellowish stools.

12 p. m. Calomel grs. iii with Carbonate of Soda grs. x one dose.

26th March, Thursday, 6 a. m. Had 2 large greenish stools of thicker consistence; pulse decidedly better; body warm; no other complaints, but as yet no urine. *Canth.* 6, every 3 hours, and fomentation to the loins.

8 a. m. *Terebinth.* 6, one dose and dry cupping to the loins.

27th March. 6 a. m. Is drowsy; had fever last night; no urine; eyes congested. *Terebinth.* φ ♏ i one dose. 12 a. m. suspecting worms ordered *Cina* 3, 2 doses.

4 p. m. 2 round worms expelled. 7 p. m. Slightly feverish; eyes congested; is drowsy; mind not clear. We learnt only just now that she was in the habit of taking opium and had called for it in the day time. Opium was therefore ordered with camphor. She had two doses, half a grain of the former and one drop of the latter in each dose.

28th March, Saturday, 7 a. m. 4 loose greenish stools; abdomen distended; in other respects much the same as before. *Nux v.* 30 one dose.

10 a. m. *Bell.* 6, 3 doses.

7 p. m. Is very drowsy; eyes much congested—no urine; has got fever, complains of burning sensation in the stomach; the ascending colon and the stomach very much distended; breathing laborious. *Ars.* 30, 2 doses.

29th March, Monday. 6 a. m. better; *China* 3, 2 doses.

10 a. m. Quinin. Sulph. gr. i, 3 doses and chicken broth.

4 p. m. Passed about 1 ounce of urine; in other respects much the same.

30th March, Tuesday. Drowsy still fœtid, purulent discharge from the vagina; eyes congested and upturned; urine about Oii drawn by the catheter. *Cic. v.* 6, 2 doses.

6 p. m. Urine Oiss drawn by the catheter; patient in other respects the same as before.

31st March. 9 a. m. discharge from the vagina most fœtid; urine Oi drawn by the catheter. The vagina, especially the mucous around the orifice of the urethra, was found to be inflamed. *Cannabis Ind.* 6, 2 doses.

4 p. m. Passed urine Oi of herself; much better; no fever; mind clear; no discharge from the vagina.

4th April. Cured.

Gleanings from Contemporary Literature.

OBSERVATIONS ON SOLAR AND LUNAR INFLUENCE, AND ITS RELATION TO OUR MATERIA MEDICA.

BY C. HERING, M. D.

HAHNEMANN in his first published work of provings, the Fragmenta, 1805, mentioned the times of day quite frequently—we find morning with 30 symptoms, evening occurs just as often and night about the same—yet forenoon and afternoon were not mentioned at all, and the times before and after midnight were almost unobserved. The noon hour was mentioned once only, and after midnight once, both under Capsicum. In the year 1827 Hartlaub in his repertory looked upon morning, evening and night as the only divisions of importance (he mentioned morning 178 times, and night 147 times).

It will here be observed that the night symptoms are not in proportion to the relative frequency of night symptoms as found with the sick. This is owing to the fact that many of the night symptoms were placed under "sleep."

Hahnemann had already at that time made observations relative to "before and after noon" as well as "before and after midnight."

In Hahnemann's work on Chronic Diseases, these subdivisions were observed throughout, with increasing accuracy; so that in Hartlaub's repertory to the remedies of the Chronic Diseases, published in the year 1830, we find 27 pages of symptoms relative to morning, 24 pages to evening, and 16 pages to night; while at the noon hour 18 symptoms stand, and to afternoon 12 pages are devoted. The forenoon, although mentioned by provers, was by Hartlaub, 1830, and Rückert, 1833, thrown into the morning. We have Bönninghausen to thank for the separation of the forenoon symptoms, and especially for the distinction which he gave between, "before and after midnight." The ground on which Hahnemann and Bönninghausen gave this distinctive separation of "before and after midnight," was the fact, so frequently observed, that at these times an aggravation was manifest with the sick, as well as the fact that various remedies showed a decided characteristic action, during the time immediately preceding, or succeeding, the midnight hour. When we bear in mind that from midnight to midday, the earth's position becomes nearer and nearer to the sun, and from midday to midnight the position becomes more and more distant, we must see that with this revolution, the midnight change is a different one from that at midday. We might compare it to a Cycloid—this may be more clear if we suppose the daily revolution of the earth to be like a wheel rolling on the inner side of the earth's orbit—and the end of each daily Cycloid will be at midnight. We feel warranted in assuming this, as there is a more decided difference at the midnight turning point; our materia medica provings, as well as our cures, show this. The two hours before midnight and the two hours after midnight, differ from each other much more than the corresponding hours before and after noon. Now these latter may be influenced by our mode of living, while the first—the midnight change—can only be attributed to the retreat from and then approach toward the sun. From this we feel warranted in making a distinction between before and after midnight. We must also consider, that as various as the influence of the sun may be in regard to warmth and cold, the changes of light, and to electricity, so too our bodies will be liable to come under similar influences, and be affected thereby. These influences *must* have an effect on our diseased system, at certain times and hours of the day. We do know that the body of the sun through gravitation must act on us, for the atmosphere surrounding us, as well as the tides of the sea, are changed in accordance with this influence.

This leads us a step farther in our subject—to the moon. It has been looked upon by many as acknowledged that the moon has an influence on the tides. That the tides are synchronous with the nearness and farness of the moon, cannot be disputed. Yet from this fact it would not be wise to accept the general opinion that the moon was the *cause* of the changes of the tides. This belief is beyond doubt, on a par with that in regard to many other phenomena, which manifest themselves under certain similar periods, and which have been treated of as being attributable to the same influence. In olden times, many things were supposed to act with the moon, though more careful examination proved this not only doubtful, but untrue. During the first attacks on superstition, many errors were corrected, yet with them many truthful and useful things were almost destroyed—like as a woman during a house-cleaning, in the desire to destroy all useless things, is often guilty of destroying, either thoughtlessly or through ignorance, valuable drapers.

From this feeling against supersition, it arises, that when we speak of a connection of a solar and lunar influence with physiology or pathology, certain would-be wise ones become as agitated as women with long hair in a room with a bat. Johannes Muller, the German physiologist, went so far as to assert that the menses had no relation whatever to the lunar month, although every physician who will make statistical tables will find that the two keep in harmony. Such a table, kept with great care by the writer during a period of five years, gave 70 out of every hundred either at the new or full moon (high tide);—about 30, and these were chronic sick cases, at times between. Many of the sick antepone or postpone, while when they return to a state of comparative health, the menses will appear with either the new or full moon.

Yet with all this, we should not say that the moon was the cause. In a house where, at 12 o'clock noon, with the striking of the clock the table is spread, the striking of the clock cannot be assigned as the *cause* of the spreading of the table. Every thing which is asserted should rest upon careful observations. These are but cotemporary phenomena ; and least of all should the adherents of Hahnemann fall into the error of considering such phenomena as necessarily synonymous with cause and effect. Hahnemann in all cases followed the strict method of induction, and avoided with the greatest care all conclusions "*post hoc ergo propter hoc.*"

The world always believed, that as the thunder succeeded the lightning, lightning must be the cause of thunder. Yet both these, thunder and lightning, may be dependent on a third condition, the sudden formation of water. Lightning is just as little the cause of thunder as the flash in the pan of a gun is the cause of the report which may follow. Here be it remembered that the conditions in these two cases are just the reverse, one of the other. If from established facts we feel that certain changes, both physiological and pathological, point to the moon in its course, it is, we would most earnestly endeavor to impress, like as we look at a clock on the wall : so here,—but it hangs on the heavens.

In our printed Materia Medica, the changes of the moon remained quite unnoticed until the year 1828,—being some two score years of close observation to the action of drugs on the human economy—when Hahnemann gave to the world the provings of Silicea, in which appears the following remark : "Silicea seems to develop most of its symptoms during the new moon."—(see 1st edition, pp. 247, symptom 489—2nd edition Vol. V., pp. 284, symptom 1017.) We would just here call the attention of those who boast of being sceptics, as if that was something wonderful, to the fact that during the full term of a generation, Hahnemann had been engaged on and making advance in the art of proving. We must admit that before Hahnemann, Silicea was looked upon as an entirely inert substance, being unknown as to its medicinal qualities. All Hahnemann's observations relative to it have been confirmed.*

Following this announcement, we had other observations, in 1836. Alumina in its action on the skin full and new moon, by Hartlaub. Calc. carb. at the full moon, Sabad. in worm affections during both new and full moon. Daphne indica during the decrease, and Clematis during the increase. In the repertory to Noack and Trink's hand book, only Silic., was mentioned ; while Jahr in the same year, 1848, gives us observations from seven remedies. In 1852, he gives, in the Symptomen Codex, 17 remedies; for this we have Bönninghausen to thank who, in his repertory to which we now have 3 additions from more recent observations by Bönninghausen, obtained by Dr. Dunham from original manuscript additions—these except the Clematis, Daphne ind. and Natr. mur. It was two score years before the first observation was made, two score more and we have observations from 24 remedies.

It is our duty to receive these observations and give them our attention and thorough investigation. This is only possible through a careful collection of facts, for confirmation of the truthful and rejection of the false. That which *cannot* be substantiated, dies off like a twig to which no sap is given ; it withers in time, is cut off, and the tree freed from a useless member.

It is of importance here to remark, that after Hahnemann, who first noticed the action of Silicea at the new moon, further investigation, by another, developed the fact of an aggravation existing also at the time of the full moon ; so also with Alumina. Calcarea which showed its greatest action at full moon, was observed to be equally indicated at new moon ; and from time to time Lycop. Natr. carb., and Sulph., were observed to act, both in new and full moon (high tides), with especial beneficial effect. As we have symptoms developed at the new and full moon, which have the high tide in common, it seems also probable that with the daily tides, the functions of the body are affected. But as these tides change, daily, varying about an hour, it renders it the more difficult to make observations on this point. So also, near the coast and on the river, where the tides are noticeable, it may be difficult. Yet the time of the local tide is not the point to be considered ; we must look to the time of the tides in open sea. We must direct our investigations to the simultaneous manifestation of phenomena with the actual sea tide.

An interesting paper by Dr. Raue appeared in the *Hahnemannian Monthly*, Vol. I., p. 12—in which the Doctor expressed himself in regard to the solar and lunar influence. This paper received but little notice, evidently because it was thought "too much trouble" for the busy practitioner to take of *valuable moneyed* time to pay attention to this subject. Yet those who thought it worth their while, found constant confirmations. This time the investigation should be made—opportunity will be given and the way made as easy as possible—for the settlement of another weighty but difficult question.

In order that the observations may be made with the greatest possible ease and accuracy, the following notice has been prepared, and a monthly table will be ready for distribution to those desiring to carefully observe facts in relation with the object therein set forth :—

NOTICE.—Observations pointing to the fact that in some cases where a medicine properly chosen was given and did not appear to act, the same medicine given in the same case at another hour of the same or next day was followed by favorable results.

This could not be traced to the time of remission or aggravation in the symptoms peculiar to the patient, or to that of the drug. From certain observed facts, the inquiry was started : Is it depending on the combined solar and lunar influence ? In order that observations may be made relative to this point a monthly table has been prepared. Such table will be furnished to physicians who may desire to observe the effect of the homœopathically appropriate single remedy applied according to this inquiry. Hours of birth and death ought also to be noted. The results to be reported to Dr. Hering.

The medicines should be given, half an hour, or an hour later than the hours specified, which indicate the lowest tides.

N.B.—Physicians desiring a table each month on a Postal Card, may obtain them by sending to C. Hering, 112 N. 12th St.—*The Hahnemann Monthly*, January 1874.

MORIBUND MEDICATION.

In an obituary notice of the late Rajah Kali Krishna Bahadoor, which appeared in a recent number of the *Bengalee*, we read as follows :—" When the civil surgeon of that station (Benares) pronounced the case hopeless, Babu Lokenath Moitry, the well-known homœopathic practitioner of the place, was sent for. His medicines, it is said, wrought miracles for three days. On Friday, the 10th April, however, the Rajah's pulse became so low that the Doctor had to give up the case in despair. On Saturday morning the Rajah had an attack of fever, and he breathed his last the same evening without a struggle and in the full possession of his senses." This is no uncommon history. How often does it happen that when rational medicine fails, or seems to fail, transcendentalism and mysticism are called to the rescue. As long as the disease seems to be within the power of rational art, and as long as the practitioner holds out hopes of recovery, resort is had to that treatment which the majority of mankind adopt and which reason and experience have declared to be most efficacious ; but, when circumstances become gloomy and prospects dark, and when the shadow of the dark valley is thrown around the sufferer, rational faith and confidence are apt to yield to imagination prompted by keen solicitude and growing despair. A drowning man is said to cling to a straw, and the patient and more often his friends, are then prone to clutch at any expedient or pretence which offers a chance of rescue. The more mystic and transcendental its character • the more does it approve itself to the strained feelings and excited fancy of the sufferer or mourners. The issue is almost always the same. The new remedy or resource seems for a time to work miracles. The drowning man seems to be buoyed upon the troubled waters by the straw. · Things are not so bad as they looked. The flame flickers and flashes ere it is extinguished. The fitful and spasmodic efforts of struggling nature are mistaken for signs of revival and it is not till the pulse unmistakably flags and finally disappears that the real truth is apprehended. Cases do occur, however, in which " moribund medication" appears to succeed. We have read of a Yankee skipper whose favorite cabin boy was ill, apparently to death, with cholera. " Do you give the case up, doctor ?" The reply was in the affirmative. A large mustard poultice was straightway prepared and the body enveloped in it. The patient recovered. There are two mottoes which express the sort of feelings, we can hardly call them principles, which are so apt to influence men in circumstances of perplexity and despair. One is " while there is life there is hope," and the other " in extremis morbis extrema remedia." How often do even the practitioners of rational medicine permit themselves to be influenced by these feelings, and apply real or metaphorical mustard poultices, when both reason and experience tell them that there is no hope. We are convinced that in many cases " moribund medication" is much overdone, and that the last moments of a dying man are rendered less calm and peaceful than they otherwise would be, by the dsperate use of blisters, electricity, brandy, beef-tea, turpentines, *et hoc genus omne.* Prayers, charms, incantations, and even homœopathy possess this advantage that they entail no physical discomfort to the sufferer, but we much fear that the moribund medication of the faculty is often meddling and annoying, nay cruel. The better we come to know disease and the more we acquire confidence in our science and ourselves, the sooner and better will we know when to stay the hand of rational art and refrain from aimless and irritating death-bed therapeutics. We cannot always prevent irrational or miraculous death-bed interference, but we ought, at any rate, when our knowledge and experience decidedly declare the position beyond human remedy, to announce the fact firmly and counsel the bewildered friends to limit their efforts to smoothing the pillow of their doomed relative. The "Civil Surgeon of Benares" appears to have acted the honest and manly part in the tragedy which the *Bengalee* describes, but would it not have been much more decent and wise had the friends of the lamented Rajah accepted the deliberate judgment of the man of science and skill and kept the poor dying old man exempt from the miraculous interposition of the homœopath. There is another form of moribund medication which too often occurs in India. A native has contracted a fatal malady and after having consulted all the native practitioners, regular and irregular, whom he knows or trusts, he or his friends, when he is literally dying, call in, as a *dernier resort*, a European doctor. The circumstances of the consultation, the desire to do something, the imperfect knowledge of the case, the expectation of friends, all urge us to prescribe, and we accordingly often feel compelled to order ammonia, mustard, brandy, &c., &c., without much reason and often without much hope. In 99 out of 100 such cases we are firmly convinced that the better course would be to tell the relatives that the season for medication has gone by, and that they should quietly accept the inevitable and, while ministering as best they can to the wants and comforts of the dying man, calmly await the great change. In religion we hear much of death-bed repentances, but a great theologian, Dr. Thomas Chalmers, has inveighed, in terms of uncommon eloquence and weight, against the folly of supposing that the mistakes of a misspent life can be rectified by a few feeble gasps of repentance uttered just as the breath is leaving the body. So in medicine, it is idle to suppose that the incurable organic effects of a mortal disease, or the irremediable degenerations of tissue which are the bane of age, can be set right by the desperate efforts which are too often made when it is too late and the remedies which are applied empirically when they can be of no avail. In such circumstances, our duty as well as our strength lie in our knowledge of when a disease or patient has arrived at a stage at which further therapeutical effort is hopeless, and therefore useless, and in frankly and gravely pronouncing opinion accordingly.—*Indian Medical Gazette*, May 1874.

चरकसंहिता।

सूत्रस्थानम्।

चतुर्थोऽध्यायः।*

अथातः षड्विरेचनशताश्रितीयमध्यायं व्याख्यास्यामः। इतिह स्माहभगवानात्रेयः॥ १॥

इह खलु षड्विरेचनशतानि भवन्ति। षड्विरेचनाश्रयाः। पञ्चकषाययोनयः। पञ्चविधं कषायकल्पनम्। पञ्चाशन्महाकषाया इतिसंग्रहः॥ २॥

षड्विरेचनशतानीति यदुक्तं तदिह संग्रहेणोदाहृत्य विस्तरेण कल्पोपनिषदि व्याख्यास्यामः॥ ३॥

CHARAKA SANHITA.

CHAP. 4. SHARVIRECHANA SATASRITYA.*

1. And now we shall expound the chapter called sharvirechana śatáritiyam : Thus said the venerable A'treya.

2. In this treatise there are six hundred evacuants. The bases of the evacuants are six. The bases of the extracts are five. Extracts are prepared in five different ways. There are fifty principal extracts.

3. After having, in this chapter, briefly illustrated the six hundred evacuants, mentioned above, we shall dsfcribe them in detail in the chapter called kalpopanishada.

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* It was our intention to have given both the 3rd and 4th Chapters of this *Sthanam* in the quintuple number still in arrears. We could, however, find space there only for the 3rd Chap. We are, therefore, obliged to break the natural order, and give the 4th Chap. here, after having already made the 5th and 6th Chaps. appear in previous numbers.—*Ed.*

त्रयस्त्रिंशद्योगशतं फलेषु। एकोनचत्वारिंशत् जीमूतकेषु योगाः। पञ्चचत्वारिंशदिक्ष्वाकुषु। धामार्गवः षष्टिधा भवति योगयुक्तः। कुटजस्त्वष्टादशधा योगमेति। कृतवेधनं षष्टिधा भवति योगयुक्तः ॥ ४ ॥

श्यामात्रिवृद्योगशतं प्रणीतं दशापरे चात्र भवन्ति योगाः। चतुरङ्गुल द्वादशधा योगमेति। लोध्रं विधौ षोड़शयोगयुक्तम्। महावृक्षोविंशति योगयुक्तः। एकोनचत्वारिंशत् सप्तलाशङ्खिन्यो-र्योगाः। अष्टचत्वारिंशद्दन्तीद्रवन्त्योरिति। षड्विरेचनशतानि ॥ ५ ॥

षड्विरेचनाश्रया इति। क्षीरमूलत्वक्पत्रपुष्पफलानीति ॥ ६ ॥

पञ्चकषाययोनय इति। मधुरकषायःअम्लकषायःकटुकषायः तिक्तकषायःकषायःकषायश्चेति तन्त्रेसंज्ञा ॥ ७ ॥

4. From madana fruit (মদন ফল) are derived one hundred and thirty three combinations; from jimuta-fruit we have thirty nine; from ikshákuu fruit, 45; from dhámárgava, 60; from kutaja, 18; from kritabedhana, 60.

5. From root of syámá and trivrit (black and white trivrit), 100; and there are ten other combinations (from trivrit); From chaturangula (সোঁদাল, cassia fistula), 12; from lodhra, 16; from mahábriksha (জটালঙ্কা নকাসিজ, euphorbia tiraculli), 20; from saptala and sankhini, 39; from danti and dravanti, 48. These are the six hundred (600) evacuants.

6. The six bases of the evacuants alluded to above are—milk (of plants), root, bark, leaves, flowers, and fruits.

7. The five bases of the extracts alluded to above are the sweet, acid, pungent, bitter, and astringent extracts as named in this treatise.

पञ्चविधं कषायकल्पनमिति ॥ तद्यथा । स्वरसःकल्कःशृतः शीतः फाण्टः कषायइति ॥ ९ ॥

यन्त्रनिष्पीडनाद्द्रव्याद्रसः स्वरस उच्यते ।
यः पिण्डस्त्वार्द्र पिष्टानां स कल्कः परिकीर्त्तितः ॥ ८ ॥

वह्नौ तु क्वथितं द्रव्यं शृतमाहुश्चिकित्सकाः ।
द्रव्यादापोथितात्तोये तत्पुनर्निशिसंस्थितात् ॥ १० ॥

कषायो योऽभिनिर्य्याति स शीतः समुदाहृतः ।
क्षिप्त्वोष्णतोये मृदितः स फाण्टः परिकीर्त्तितः ॥ ११ ॥

एतेषां यथापूर्व्वं बलाधिक्यम् । अतः कषायकल्पना व्याध्यातुरबलापेक्षिणी । नत्वेवं खलु सर्व्वाणि सर्व्वत्रोपयोगीनि भवन्ति ॥ १२ ॥

8. The five different modes of extraction are squeezing, pounding, decoction, cold infusion, warm infusion.

9. The juice of a substance (plant) squeezed or pressed out i called *svarasa* (succus). *Kalka* is the paste formed by pounding plants fresh or moistened if dry.

10 & 11. *Srita* is the extract by decoction. The extract, obtained by infusing in cold water at night plants previously bruised, is called *síta*. The extract, obtained by infusing in warm water plants previously bruised, is called *phánta.*

12. The strength of these is in the order of their precedence (i.e. the first is the strongest, the second is less strong than the first, the third less than the second, and so on.) Hence the application of these extracts will depend upon the intensity of the disease and the strength of the patient. All these cannot certainly be applicable to all diseases and all patients.

पञ्चाशन्महाकषायाइति यदुक्तम् तदनुव्याख्यास्यामः । तद्यथा ॥ १२ ॥

जीवनीयोबृंहणीयो लेखनीयोभेदनीयः सन्धानीयो दीपनीय इतिषट्कःकषायवर्गः ॥ १४ ॥

बल्योवर्ण्यःकण्ठ्यो हृद्यइति चतुष्कः कषायवर्गः ॥ १५ ॥

तृप्तिघ्नोऽर्शोघ्नःकुष्ठघ्नः कण्डूघ्नः क्रिमिघ्नो विषघ्न इति षट्कः कषायवर्गः ॥ १६ ॥

स्तन्यजननः स्तन्यशोधनः शुक्रजननः शुक्रशोधनइतिचतुष्कः कषायवर्गः ॥ १७ ॥

13. We shall now describe the fifty varieties of extracts mentioned above. These are as follows :—

14. Jívaniya (life-prolonging), vrinhaniya (nourishing), lekhaníya (corpulency-reducing), bhedaníya (purging), sandhaníya (binding), dípaníya (appetite-increasing). These form six varieties of extracts.

15. Valya (strengthening), varnya (beautifying, that which improves the color), kanṭhya (that which is good for the throat, that which improves the voice), hridya (good for the chest)—these form four varieties of extracts.

16. Triptighna (that which takes off the feeling of fulness of the stomach), arśaghna (that which destroys piles) kushtaghna (that which is good in leprosy), kandughua (that which is good for itching eruptions), krimighna (anthelmentics), vishaghna (antidotes),—these form six other varieties of extracts..

17. Stanyajanana (milk-promoting), stanyaśodhana (milk-purifying), śukrajanana (semen-promoting) śukra sodhana (semen-purifying),—these form four other varieties of extracts.

स्नेहोपयोगःस्वेदोपयोगोवमनोपयोगोविरेचनोपयोग आस्थापनोपयोगोऽनुवासनोपयोगःशिरोविरेचनोपयोगइति सप्तकः कषायवर्गः ॥ १८ ॥

छर्दिनिग्रहणस्तृष्णानिग्रहणो हिक्कानिग्रहणश्चेति त्रिकः कषायवर्गः ॥ १९ ॥

पुरीषसङ्ग्रहणीयःपुरीषविरजनीयःमूत्रसङ्ग्रहणीयःमूत्रविरेचनीय मूत्रविरजनीय इति पञ्चकः कषायवर्गः ॥ २० ॥

कासहरःश्वासहरःशोफहरःज्वरहरःश्रमहरइतिपञ्चकः कषायवर्गः ॥ २१ ॥

18. Snehopoyoga (fit adjuvants for oils either for internal or external use), svedopoyoga (adjuvants for sudorifics), vamanopoyoga (adjuvants for emetics), virechanopoyoga (adjuvants for purgatives), ásthapanopoyoga (adjuvants for un-oily enemata), anuvásanopayoga (adjuvants for oily enemate) śirovirechanopoyoga (adjuvants for errhines),—these form seven other varieties of extracts.

19. Chhardinigrahana (that which relieves vomiting), trisnanigrahana (that which relieves thirst), hikkánigrahana (that which relieves hiccup),—these form three other varieties of extracts.

20. Puríshasangrahaníya (astringent), puríshavirajaniya (that which gives color to stool, i.e. causes secretion of bile), mútrasangrahaniya (that which checks excessive secretion of urine), mútravirechaniya (diuretic), mútra virajaníya (that which corrects the urine,—these form five other varieties of extracts.

21. Kásahara (cough-relieving), śvásahara (asthma-relieving), śophahara (dropsy-removing), jvara hara (febrifuge), śramahara (fatigue-relieving),—these form five other varieties of extracts.

दाहप्रशमनःशीतप्रशमनउदर्द प्रशमनोऽङ्गमर्दप्रशमनःशूलप्रशमनइति पञ्चकः कषायःवर्गः ॥ २२ ॥

शोणितास्थापनो वेदनास्थापनो संज्ञास्थापनःप्रजास्थापनो वयःस्थापनइति पञ्चकः कषायवर्गः ॥ २३ ॥

22. Dáhaprasamana (that which relieves burning), śitaprasamana (that which relieves chilliness), udardda prasamana (urticaria-relieving), anga-mardda-prasamana (that which relieves aches), śúlaprasamana (pain relieving)—these form five other varieties of extracts.

23. Sonitásthápana (that which corrects disorders of the blood and brings it back to its normal condition), vedanásthápana (that which removes pain and restores the parts to their condition), sanjnyásthápana (that which restores consciousness), prajásthápana (that which prevents abortion), vayahsthápana (that which prolongs youthfulness),—these form five other varieties of extracts.

(To be Continued.)

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VOL. VII.] June & July 1874. [NOS. 6 & 7.

THE MATERIA MEDICA.

36.—COLOCYNTHIS.

Nat. Ord.: Cucurbitaceæ.

Habitat: Southern Spain; islands of the Ægean Sea; Cyprus; deserts of northern Africa; Cape of Good Hope; Asia Minor; Syria; Arabia; India; Japan.

Off. Part: Pulp of the dried decorticated fruit freed from seeds. This is light, spongy, white, or yellowish, inodorous, but intensely bitter.

Composition. We take the following from Pereira:—

In 1817, Braconnot analysed the watery extract. The pulp was analysed in 1818 by Meissner. Vauquelin examined the active principle.

Meissner's Analysis.

Bitter Matter (*Colocynthin*)	14·4
Extractive	10·0
Bitter fixed oil	4·2
Resin insoluble in ether	13·2
Gum	9·5
Bassorin	3·0
Gummy extract (obtained from the ligneous fibre by potash)	17·0
Vegetable jelly	0·6
Phosphate of lime and magnesia	5·7
Ligneous fibre	19·2
Water	5·0
Colocynth Pulp	101·8

Braconnot's Analysis.

Bitter matter (*Colocynthin*), with resin	41·4
Resin	4·3
Vegetable jelly (*pectin*)	18·6
Azotic matter	21·4
Acetate of potash	5·7
Deliquescent salt of potash not soluble in alcohol	7·1
Watery Ext. of Colocynth	98.5

Old School Uses: In olden time these were more extensive than they are now. Thus it was employed by Faber in Gonorrhœa, by Da lberg in certain chronic pains of the head and neighbouring parts, and Merat and Delens in their *Dictionnaire Univ. de Mat. Med.* say that, "colocynth had not only been employed as a drastic, but also a vermifuge, hydragogue, emmenagogue, deobstruent; it has been used for sciatica, pains occasioned by mercury, rheumatism, gout, even rage, &c." In the present day the use of the drug has dwindled down into that of a simple *purgative.* As such of course it is employed in all affections where a purgative is thought necessary, as for instance in hepatic and visceral congestion, in apoplexy, in dropsy, in amenorrhœa, &c. Hufeland thought it was an excellent *diuretic,* and employed the decoction for the purpose.

Concordances.

Moral and intellectual faculties.—Anac. aur. *cupr.* hyosc. lyc. stram. veratr.

Seat of the diseases.—Arn. bell. *calc.* canth. carb-veg. chin. ignat. kali. *lyc.* MERC. natr-mur. nitr-ac. N-VOM. petr. *phosph.* PH-AC. PULS. *rhus.* SEP. sil. SPIG. SULPH. thuj. valer. veratr.

Morbid states and sensations.—Ang. arn. asaf. *bell. calc.* CAUST. chin *cocc.* con. GRAPH. *ignat. kali. lyc.* merc. natr-mur. nitr-ac. *n-vom.* petr. phosph. ph-ac. PLAT. *puls. rhus.* SEP. sil. spig. spong. stront. *sulph.* sulph-ac. thuj. veratr.

Glands.—*Bell.* carb-an. con. lyc. phosph. puls. sulph.

Bones.—Arg. bell. ph-ac. puls. staph.

Skin.—Acon. *arn. bell. phosph.* PULS. rhus. sulph.

Sleep and dreams.—Bell. *n-vom.* puls.

Pyrosis.—Acon. ars. *bell.* BRY. canth. chin. hyosc. merc. n-vom. phosph. stram. sulph.

Time.—Asaf. *bell.* ignat. *lyc.* nitr-ac. PULS. sil. zinc.

Exacerbations.—Ars. aur. bell. *bry.* calc. CHAM. con. dros. *ferr.* hep. IGNAT. kali. *lyc.* mags. mang. *merc.* natr-mur. N-VOM. phosph. ph-ac. plat. PULS. rhodod. *rhus.* SEP. spig. STAPH. sulph. veratr.

Concordances in general.—Arn. BELL. bry. calc. caust. cham. chin. con. graph. *ignat.* kali. LYC. *merc.* natr-mur. nitr-ac. N-VOM. *phosph.* ph-ac. plat. PULS. *rhus. sep.* sil. spig. staph, *sulph.* veratr.

Antidotes.—*Camph.* (caust.) (cham.) coff. *staph.*

Hahnemann's Preface.

Take one grain of the dried *Cucumis colocynthis* and prepare the triturations and dilutions in the usual fashion. Even one globule of the highest potency is excessively powerful.

Colocynthis has been found especially useful in the folowing affections: —

Anxiety; want of religious sentiments; porrigo in the face; toothache; stomach-ache, also when occurring after a meal; *violent colic,* especially when brought on by vexation: grunting in the abdomen; inguinal hernia; chronic diarrhœa; pain in the shoulder-joint as if it had been bruised, brought on by vexation; various kinds of bad consequences from *indignation and great provocation to anger, internal gnawing grief, excited by the unworthy treatment which had either been inflicted upon one's-self or upon persons which excite one's compassion,* etc. ; cramp in the calves and bowels, cramp-colic, bilious fever, insomnia, etc. ; *coxalgia,* when the hip-joint feels as if the femur were fastened to the os innominatum with iron claws, accompanied by pains which dart periodically from the sacro-lumbalis muscle into the thigh.

It is a characteristic symptom of *Colocynthis* to excite crampy pains in internal and external parts, that is, tonic spasms, with clawing aching ; in this case *Staphisagria* is the antidote. Black Coffee and Camphor likewise relieve the prejudicial effects of Colocynthis ; also Caust., Cham., Tab. (?) Large doses are counteracted by tepid milk, infusion of galls, Camph., Op.

This drug has been proved by Drs. S. Hahnemann, Aegidi, F. Hahnemann, Hornburg, Gutmann, Langhammer, Stapf, Ruckert.

[The drug was reproved by the Austrian Association. There were fifteen provers, almost all of whom were ignorant as to what medicine they were proving. They were Dr. Franz Hector Arneth, Dr. Jac. Karl Böhm, Dr. Willhelm Fleischmann, Dr. Ernst Hilarius Fröhlich, Dr. Heinrich Gerstl, Dr. Franz Hausmann, Dr. Karl Maschaner, Dr. Franz Puffer, Dr. Edward Reisinger, Dr. Joseph Rosansl, Dr. Cajetan Wachtel, Dr. Franz Karl Weinke, Dr. J. P. Würstl, Dr. Franz Wurm, Dr. Watzke. The provings were conducted with the utmost care, and the symptoms noted as they occurred,—in the chronological order of their development. These provings were embodied in an excellent essay by one of the provers Dr. Watzke, which was published in the first number of the *Oesterreichische Zeitschrift für Homœopathie.* We have taken the following "Indications for Colocynth," &c. from this essay which has been rendered into English by Dr. Metcalfe of New York. Our *pathogenetic symptoms* include the symptoms of the reprovings.—*Editor.*]

Indications for Colocynth.—Allied Remedies.—Antidotes.—Size and Repetition of the Dose.

The curative indications are essentially identical with the physiological effects of a remedy. The latter once known, so are the former. The study of the effects, which Colocynth developes in the healthy body, affords the best guide to its appropriate use at the bedside. *The usus in morbis can afford no fresh indications* ;[*]—it merely sifts and throws light on the materials furnished by pharmacology ; it decides on the greater or less availableness, the value and meaning of the medicinal symptoms, obtained by experiments on the healthy ; it is the touchstone of the results of provings, confirming faithful observations, rejecting the product of inexact or superficial experiments, the tissues woven by fancy or by falsehood.[†]

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[*] We are not at all disposed to throw stones at a Homœopath here and there, who has become acquainted with, and continues to use, a remedy, such as *badiaga, filix-mas,* &c., solely *ex usu in morbis.* We must make a virtue of necessity. We must condemn, however, in the strongest terms, the conduct of those who (like HAHNEMANN in his later editions) insert in the *materia medica* all the symptoms of a disease which has been cured by a particular remedy. This is opening doors and windows, and inviting error in ; this is a process for converting a *pure* into an *impure materia medica.*—*Watzke.*

[†] We remind our readers of the pretended proving of medicines by Fickel, the homœopathic Judas. We know not that there can be found in the whole range of homœopathic literature more than two cures effected by Fickel's lying drugs.—*Watzke.*

The clinical study, therefore, of Colocynth, will have an important influence on its therapeutic employment; it forms a necessary supplement to the curative indications drawn from its physiological effects.

Let us first glance at the indications for Colocynth furnished by our colleagues.

With regard to the disposing causes of diseases which the medicine is fitted to cure, according to NOACK and TRINKS, Colocynth corresponds especially to sthenic, dry, bilious melancholic, venous-hæmorrhoidal constitutions, and the cholerico-melancholic temperament. But our experiments on the healthy as well as the published cures by Colocynth, show it to have an absolute power over all constitutions and temperaments. Dislike to speaking, irritabiltty, moroseness, and other symptoms, indicate, it is true, an influence, though perhaps not a direct one, on the mind and temperament; but they appear as the usual accompaniments of abdominal sufferings, from whatever cause they may have arisen. At all events, a great number of medicines have this in common with Colocynth.

The opinion expressed by HAHNEMANN *with regard to the curative indications to be drawn from exciting causes,* that Colocynth was especially adapted for the effects of anger, indignation, vexation, and brooding over the unjust treatment of oneself or others, among which he enumerates cramp in the calves of the legs, spasmodic colic, sleeplessness, rheumatism in the limbs, &c., we believe to be so far well-grounded that the passions sometimes, especially if acting for a length of time, give rise to morbid phenomena similar to those which colocynth produces in the healthy; but it is not on this account proved that Colocynth has any direct specific effect on the mind. Neither have our experiments shown any aggravation of the symptoms enumerated to arise from mental impressions, nor have we found in our clinical observations a sufficient number of cases in which Colocynth cured the symptoms mentioned by HAHNEMANN more surely and quickly when they proceeded from mental than when they were due to physical causes.

On what grounds FRANZ proceeds, when he affirms that Colocynth takes precedence even of chamomile, for anger and its effects, we cannot tell. There is more foundation for his opinion that it is peculiarly adapted for women with abundant catamenia. The power Colocynth possesses to promote the flow of the menses, and to bring on menorrhagia, and even abortion, is proved beyond all doubt.

If Colocynth is more often useful to persons who lead a sedentary life than to others, this is not to be ascribed to any especial susceptibility of such person to the curative action of Colocynth; it only shows that neglect of exercise is not unfrequently the cause of diseases for which the remedy is found in Colocynth.

Homœopathic indications for Colocynth, *drawn from the symptoms of the diseases it has cured* such as *rheumatismus acutus*, gouty conditions, paralyses, neuralgias, migraine, gastralgia, ischias, psoitis, sporadic cholera, epidemic dysentery, &c., are the counterparts of those which the Arabians set up for it. The reformed science of healing ought to reject every such indication.*

Among HAHNEMANN's therapeutic hints before the third edition of Colocynth, we find among several unimportant symptoms, such as anxiety, toothache, rumbling in the abdomen, the following: "*Deficiency of religious feeling, eczema of the face, and inguinal hernia.*" Neither our somewhat thorough proving, nor yet HAHNEMANN'S, has given any sanction to the charge of impiety against Colocynth, and we greatly fear that HAHNEMANN has introduced that symptom from some one of his patients. As to the facial eruption and inguinal hernia, our homœopathic literature presents but a single feeble analogy.*

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* It seems very probable that the (generally unjust) condemnation pronounced by HAHNEMANN upon all nosological names, was founded upon no other ground than a conviction of the utter worthlessness of such names in reference to therapeutic indications. Unfortunately, he fell out with himself a little subsequently. The scheme of diseases, with which he introduced his antipsoric remedies, is but little better than the indefinite, indistinct, generalizing indications of the old school.—*Watzke.*

HAHNEMANN mentions, as a leading characteristic of Colocynth, its power "*to excite cramp-pain, i. e. (!) tonic cramp, with constrictive pressive pain in internal and external parts.*" This definition is objectionable, inasmuch as a theory of the cause of the pain is implied; and is also defective, for Colocynth evidently produces its direct and primary abnormal impression on the sensorial sphere of the nervous system.† The influence it exerts over the motor sphere is almost limited to the involuntary muscles; and in this case also is indirect, and to be ascribed to sympathy.

MELICHER'S *puerperal fever*, and RUCKERT'S *psoitis chronica*, we have already dissected in Chapter X. They are both to be stricken out of our repertories, and *lumbago* substituted for the latter. Whether the diagnostic criticisms which we have made in reference to SCHULER'S *ophthalmia arthritica*, RUOFF'S *peritonitis*, SCHRON'S *sporadic cholera* and *vesical catarrhs*, SCHELLHAMMER'S *dropsy of the chest and abdomen*, and GROSS'S *stiff arm*, are deserving of regard in any future development of the curative indications of Colocynth, is left to the judgment of our colleagues.

The hypothesis of SCHRON and HERING, that Colocynth is indicated for ichthyosis and lepra, rests chiefly on phenomena of doubtful value, which occurred in two patients cured by Colocynth.‡

NOACK ANP TRINK'S indications for colocynth are chiefly abridged histories of face-aches, megrims, colics, and diarrhœa, treated exclusively by Colocynth, by GASPARI, ATTOMYR, SCHULER, NENNING, HARTMANN, and others. Having given these cases in full in our 10th chapter, we have nothing farther to say of them here. We shall only quote some remarks derived from the posthumous papers of Dr. HARTLAUB, senior. According to these observations, *apparently made upon the sick*, the following symptoms are indications for the employment of Colocynth:

1. Intense pain in the forehead (especially in the eyebrows) and in the face (especially pulsation and tearing in the cheek-bone) beginning with itching; worst in the evening and night; inflammation of the eyes, on looking at the sky; pain as if the eyes would fall out of the head.
2. Tearing pain, going from the pit of the stomach deep into the abdomen as though the chest would fall, aggravated by coughing and walking; pain in the small of the back; tenderness of the abdomen to the touch; alternation of cold and heat; on going to stool, violent pain from the abdomen to the small of the back.
3. Spasmodic, inflammatory, and flatulent colic; colic from cold and mental emotions; every evening at six o'clock a single vomiting of bitter matter preceded by cutting pain in the left hypochondrium, drawing to the abdomen, stomach, and back; anorexia, hard fæces.
4. Diarrhœa, with pressure on the abdomen and tenesums.

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* NENNING (*Allg. hom. Zeit.* vii. 73) mentions a single case in which Colocynth ***alleviated the pains*** of an epiplocele.—*Watzke.*

† Thus Colocynth affects only the sensitive filaments of the fifth pair (of the first division, especially the *frontal* branch, the whole of the second division, and the *lingual* and *auricular* of the third), while its motor portion, which does not run through the ganglion, and is merely destined for the muscles of mastication, is not in the least affected by it.—*Watzke.*

‡ HERING (*Archiv*, xi., 2, 36) proceeds on the following symptoms of Colocynth:—Shortening of the tendons (?); drawing up of the limbs to the body; tractive pain in the tendons of the thumbs; cramp-like pain in the hands, making it difficult to unfold them; pain as from the psoas being too short; tearing in the soles; pain from the side of the nose up to its roots a precursory symptom of ulcers in the nose (?); scaling off of the skin of the whole body (?); itching in the ham; buboes in the axillæ (?).—*Watzke.*

5. Sticking pain, sometimes in one place, sometimes in another, in one of the lower limbs, causing limping.

Finally we introduce the diffuse indications laid down by HECHENBERGER, which are derived less from provings on the healthy than from experiments on the sick, and prove abundantly that he scarce dimly appreciated the character of Colocynth, much less defined it in a clear light. It is indicated according to him, first in affections appearing in winter or spring as a result of a torpid, necessitous, confined life as a *status pituitosus, gastrismus chronicus, febris gastrico-pituitosa, gastrico-rheumatica, atrabilaria et venosa Richteri*, or as the hepatic congestion and portal obstruction of the old diagnostics or as *ptyalismus suecicus*, and presenting the following symptoms :

Peculiar, vertiginous, dull headache, especially in the morning after a restless, dreamy sleep ; earthy, puffed face ; yellowish conjunctiva ; nauseous taste ; smell from the mouth ; tongue, white coated ; inclination to vomit in the morning after rising ; loss of appetite ; distressing fullness of the epigastric region ; frequent pyrosis with boring, constrictive pain in the stomach ; vomiting of the ingesta with a feeling as if the stomach were floated with water, at first periodical, finally more constant ; flatulence ; dull, deep-seated pain in the hepatic region ; irregularity of the bowels ; expectoration of mucus, with rattling and oppressed breathing ; frequent chills ; heaviness of the feet, with wandering pains in the limbs ; general debility ; emaciation ; irritability ; melancholy frame of mind ; thoughtlessness ; torpidity of all the intellectual faculties.

HECHENBERGER considers Colocynth indicated in the second place, in disorders which come on secondarily to previous diseases, in consequence of neglect, frequent exposure to cold, &c.—atonic dropsy, hæmatemesis, hæmorrhoidal colic, menostasia, or which appear as metaschematic or which appear as metaschematic or *crises erroneæ*, such as ischialgia, jaundice, gout, hemicraniæ.

Were we required to give an exact and complete view of the indications for Colocynth, we should refer the inquirer to the pharmacological and clinical materials already given, (chapters iv.–ix.) Any abstract of those materials would be defective, and could not save the student the trouble of studying those chapters. Besides this, a theory of the indications cannot be derived from a simple abbrevation ; it requires abstraction—a disposing of the facts according to some theoretical view. From its very nature it can be nothing more than the glass through which we view the phenomena. In presenting below to our colleagues, therefore, our generalization from the preceding chapters, we do not imagine ourselves to have found medical treasures which they would not have discovered by their own efforts ; no, we merely use our right too see things through our own glass, and are neither weak enough to believe it is the best, nor so deficient in modesty as to insist upon its adoption by others.

The great, clumsy, mis-shapen monster presented by the indications for Colocynth of the old school, embracing almost all the diseases to which the humon frame is subject, (need we refer to our second chapter ?) is reduced by the physiological provings, and the critical sifting of the clinical materials before us, to a less pretending, but we trust a well-formed, tolerably healthy, and very promising offspring. Colocynth has, in our hands, instead of a neglected and despised polychrest, become an indispensable oligochrest. Its formerly much-lauded powers against dropsies, epilepsies, apoplexies, paralyses, intermittent fevers, chlorosis, and jaundice have proved either illusory, or at least problematical.* The whole curative sphere of Colocynth in the new system, is almost confined to a few neuralgiæ and hyperæsthesiæ, and of these almost exclusively those which affect the *trigeminus*, the *cœliac plexus*, and the *lumbar and femoral* nerves. And even here its efficacy is limited to a few forms of hemicrania, prosopalgia, cœlialgia, colic, and ischialgia, *depending on peculiar conditions, and appearing under peculiar circumstances.* What these are, will best appear from a careful perusal of chapter viii.: we venture, however, on some conjectural hints.

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* If we did not confine ourselves in establishing our curative indications to physiological and clinical observations, but allowed some play to theory and hypothesis, we should incline to argue favorably of the effects of Colocynth in intermittent fever, regarded by many authors as a pure

1. The *hemicraniæ* and *prosopalgiæ* which Colocynth cures, proceed from an exaltation of sensibility, from an excitement dependent on rheumatic, gouty, or gastric irritation, or on congestion of the fifth pair, in all cases on a purely functional derangement of the sensitive filaments.[*] In organic changes from deeper causes, the efficacy of Colocynth is very doubtful.

Hemicraniæ, arising from thickening of the arachnoid, or hypertrophy of the meninges, tumefaction, and induration of the pacchionian bodies, in erosion or exostosis of the skull, effusion of serum, or purulent deposits in the brain, will receive no benefit from Colocynth. Recourse may be had in such cases for cure or alleviation to *calc.*, *caust.*, *sep.*, *sil.*, *sulph.*, and *graph.*

In like manner, Colocynth is of no use in organic and centric prosopalgiæ, from exostosis of the teeth, hypertrophy of the bones of the skull or face, fungous and scirrhous tumors of the membranes of the meninges, cartilaginous or aneurismal malformation of the cerebral veins, &c. More may be effected in such cases by *ars.*, *aur.*, *mgnes.*, *calc.*, and *sep.*

The Colocynth-hemicraniæ are generally seated in the course of the frontal nerve, and are accompanied by violent pains in the eye, and alternate with neuralgiæ of the cœliac plexus. Next in efficacy to it are *bry.* and *nux-vom.*, and next to them *puls.*, *bell.*, *phosph.*, *valer.*, *cham.*, *agar.*, *verat.*

In the prosopalgiæ to which Colocynth is suited, there are no twitchings of single muscles of the face and palsied feeling of the affected side. The pains follow the course of the infraorbital nerve, are frequently periodical, and are accompanied by toothache, (*neuralgia infraorbito-dentalis.*) Next to Colocynth stand in this connection, *bell.*, *caps.*, and *verbasc.*; and, more remote, *china.*, *staph.*, *con.*, *nux-vom.*

2. *The neuralgiæ of the cœliac plexus* and its branches, are particularly likely to be quickly and permanently removed by Colocynth, when they occur as substantive affections, not caused by derangement of stomach, but by cold, vexation, or anger, occurring during the period of evolution, complicated with spinal irritation and neuralgia of the femoral nerves, with hæmorrhoidal difficulties, chronic diarrhœa, or vermicular symptoms.[†] Next in efficacy come *cham.*, *bell.*, *puls.*; then *valer.*, *cocc.*, *coff.*, *nux.*, *secale.*, *ign.*, *stann.*

Colocynth will hardly relieve, far less cure, colic from inflammation of the great gut or peritoneum from gall-stones or nephritic calculi, perforat-

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neurosis of the cœliac plexus; in epilepsy, depending on spinal irritation; in dropsy, where the accumulation is owing to exaggerated nervous influence; and in apoplexy, brought on by neurrosis of the ganglionic system, with a reflex action on the brain.

[*] By this we do not by any means intend to deny to Colocynth all efficacy in complaints in which organic changes have taken place, and plastic effusions have been formed. The latter are frequently consequent on abnormal nervous influence, and disappear with it.—*Watzke.*

[†] Colocynth is suited in an especial manner to the affection, first described by ROMBERG, (*Lehrbuch der Nervenkrankheiten*, 140,) under the title of "*neuralgia hypogastrica.*" It is a hyperæsthesia of the *hypogastric plexus*. The symptoms are,—pains as of labor, in the lower belly; pressive pain about the sacrum, with sensation of pressure on the rectum and bladder, and in women on the uterus and vagina. *Pains in the upper part of the thighs are a frequent concomitant.* In girls, in whom it not unfrequently occurs at each menstrual period during the development of puberty, the symptoms resemble greatly those of prolapsus or retroversion of the uterus, but come on in paroxysms, and are not relieved by change of posture. *This affection occurring in the male sex commonly passes under the name of hæmorrhoidal colic.*—*Watzke.*

ing ulcers in the stomach, mesenteric tubercules, tubercular ulcers in the intestines, &c. Some of these set all treatment at defiance ; others require *merc.-viv.*, or *corr.*, *bell.*, *bry.*, *canth.*, and *ars.*

3. Of the ischialgiæ those most under the control of Colocynth, are such as are caused by affection of the terminating filaments of the spinal cord, as also those arising from cold, from violent emotions, or remaining after mechanical violence, or connected with gout, suppressed hæmorrhoids or the processes of involution and evolution, or complicated with affections of various parts of the cœliac plexus. *Cham.*, *rhus*, *puls.* are cognate remedies.

It is of no value in ischiagiæ, from tumefaction of the bones of the pelvis, carcinoma of the pelvic viscera, change in the substance of the nerves, or *morbus coxarius*, or in those which are due to the localization of a morbid condition diffused through the system. Recourse must be had in such cases to remedies that are homœopathic to the fundamental evil, such as *calc.*, *sil.*, *carb.-veg.*, *merc. ars.*, *hep.-sulph.*, *sulph.*, and others.

In the *morbus-coxarius* itself, Colocynth will be found of little service, and Stapf is greatly mistaken in his surmise, (*Archiv.*, xvi. 1, 93,) that it will be found one of the chief remedies in spontaneous (nervous) lameness. Both the cases which Thorer and Lobethal (*vide* chapter x) think they cured with Colocynth seem to us to have been cases of *ischias.* The changes in the position of the foot and trochanter are quite as remarkable in that disease. (Compare Canstatt *Med. Klin.*, 3, 30.) No remedies but such as we have mentioned above will suffice to arrest the progress of a specific inflammation of the hip-joint.

Related and Antidotal Remedies.—The affinities and antidotal relations of Colocynth, and *vice versa*, may be gathered from the foregoing observations.

Where the formidable symptoms of poisoning by Colocynth make their appearance, the mechanical and chemical resources of medicine must be resorted to, as in other cases of poisoning. In addition to the copious draughts of oil, warm milk, or water, wet bandages applied to the abdomen, and the administration of tincture of opium and black coffee effect the most speedy relief.

We do not know on which grounds Jahr asserts Colocynth to be merely the antidote of *causticum ;* and Noack and Trinks, that it counteracts only *causticum* and *mercurius.*

Duration of Action.—The average duration of the action of Colocynth may be set down at from 2 to 6 hours ; but when it has producad an intense effect, it frequently extends over several weeks.

Dose and Repetition.—No fixed rules can be laid down as to the size and repetition of the dose. *Judging from our own experiments, and the published cases of cure by Colocynth, we are inclined to think, that the sixth (decimal) dilution or trituration is seldom too large, and the first as seldom too small a dose.*

We are in the habit of repeating the dose of Colocynth every hour, or every 2, 3, or 4 hours in acute, and in as many days in chronic cases.

Pathogenetic Symptoms.

Mind :—

. Dejection of spirits ; sadness ; want of disposition to talk.
. Want of disposition to talk, the whole day.
. Disinclination to intellectual labor.
. Peevish mood, he feels offended very easily, and dislikes to answer one's questions.
5. Laconic mode of expression.

. Apathy with lassitude, cannot bear the society of persons he is intimate with.

. Excited, irritable state of temper.

. Extremely out of humour; he is extremely impatient, dissatisfied with every thing; he feels painfully embarrassed and vexed, when he is to utter one word; even innocent trifles vex him.

. He desires many things, he does not feel at his ease.

10. Great anguish.

. Return of the vexatious thoughts which he had forgotten, but which soon yielded to an uncommon cheerfulness.

. Felt for several weeks uncommonly dull, depressed and debilitated.

. (Want of religious sentiments.)

Sensorium :--

. Obtusion of the head, especially the forehead.

15. Dulness of the head early in the morning, especially in the frontal region, with unusual weakness of memory.

. Muddled state of the head, as after nightly drinking.

. Dulness of the head and vertigo, in the beginning of the colic.

. Vertigo, when quickly turning the head; it seems to originate in the left temple, as if he would fall, with vacillation of the knees.

. Intimations of vertigo and nausea.

20. Sudden, rapidly passing vertigo, with darkness before the eyes, in the evening, on sitting down.

. Slight dulness of the head, sensibility in the temples and forehead, transitory attacks of vertigo.

. Giddiness with slight delirium and deafness.

. Confused feeling in the head, with pressure in the orbits, and general feeling of chilliness.

. Difficulty in collecting his thoughts.

Head :—

25. Violent headache, as if brought on by a draft of air, disappearing gradually when walking in the open air.

. Single attacks of slight pressure in the head, alternately in one place or the other.

. Aching along the sagital suture, more violent during exercise, and when shaking the head or when stooping.

. Pressing headache in the forepart of the head, most violent when stooping, or when lying upon the back, for six hours.

. Pressing and crampy pain in the upper part of the brain.

30. Pressing and drawing pain in the left side of the forehead.

. Drawing semi-lateral headache, (a. 1 h. and a half.).

. Tearing headache in the whole of the brain; in the forehead, it is a mere drawing, as if the forehead would be pressed out, most violent when moving the eye-lids.

. Boring stitches in the right temple, going off by contact.

. Painful and oppressive grinding in the left temple.

35. Painful and tearing grinding through the whole of the brain,

increased to an intolerable excess by moving the eye-lids, (after a few h.).

. Pressure felt in an arc, corresponding with the upper and internal boundary of the left frontal fossa.

. Severe pain in the left eye and vertex, simultaneously.

. Pressure in the left side of the head, with burning in the temple, it extends to the root of the nose and the upper teeth.

. Pulsation in the temple, with pressure, which afterwards changed to lancinations, simultaneously with the same feeling in the left shoulder. Pressure and tension in the occiput, most at inferior lateral condyle.

40. Digging pain from behind forward in the head.

. Head feels hot.

. Head and eyes sensitive to the least movement.

. Feeling as if the temples were screwed into, with heaviness of the eye-lids, without sleepiness.

. Dulness of the right side of the head especially in the temple.

45. Pain in the vertex and left eye as if it was a nervous pressure.

. Fulness of the head early in the morning especially in the frontal region with unusual weekness of the memory.

. The frontal headache returned in the forenoon when walking.

. Dulness of the head in the frontal region.

. The pressure on the temple grew gradually acute and cutting.

50. Troublesome pressure in the left side of the nape, increased by turning as in rheumatism.

. Heaviness and stupor of the sinciput, constant crawling stitching compelling him to scratch, on the whole left side of the head.

. Pressing and tension in the occiput, most felt at the inferior lateral protuberance

. Pressing in the forehead.

. In the evening considerable headache, and unfitness for every occupation.

55. Dull headache in the frontal region aggravated by bending forward.

. Painfulness of the frontal region.

. The feeling of depression and debility increased towards noon accompanied by painfulness of the whole head, especially over the temporal and frontal regions, scalp and eye-balls, aggravated by moving the eyes, straining the sight or bending forwards.

. While riding, felt the pain in his head becoming more preceptible.

. He was obliged to move slowly, tread softly, as the contrary course seemed to make the brain shake about, as if loose against the skull (in the median vertical region);, this was accompanied by very sore pain, and as it lasted during the whole quarter of an hour's walk, it put him in a very bad humour.

60. Occasional pressure on the vertex in the evening.

. Sensitiveness of the cerebellum (on rapidly turning the head).

Scalp :—

. Dull and drawing pain in the outer side of the forehead, early in the morning, after rising, (after a quarter of an h.).

. Burning pain in the integuments of the forehead, above the eye-brows.

. Smarting burning in the hairy scalp, on the left side.

65. The roots of the hairs are painful.

Eyes :—

. Pain in the eyes, a sharp cutting in the right eye-ball.

. Burning cutting in the eye, also in the lower eye-lid of the right eye, when at rest.

. Stabbings as with knives, in the right eye-ball, extending as far as the root of the nose.

. Pain in the eye-lids as from excoriation.

70. Burning sensation in the upper eye-lid of the right eye (after 34 h.).

. Burning pain in the whole of the right eye-ball.

. Prickling and burning sensation in the inner canthus of the right eye.

. Smarting burning below the upper eye-lid.

. Violent itching in the right eye-ball, obliging one to rub.

75. Aching of the eye-balls.

. Painful pressure in the eye-balls.

. Slight prickling in the conjunctiva palpebrarum of the left eye. Next morning it was perceptibly inflamed.

. Here and there were indications of commencing ulceration which continued to increase till four in the afternoon, when it was complete ; next morning cicatrization had taken place.

. Stitches above the right eye, accompanied by itching of the scalp.

80. Exceedingly painful sticking burning on the edge of the left upper eye-lid.

. Fine sticking and drawing varying in intensity with aching in the left orbit.

. The left eye-lid lay thick and heavy upon the ball, which seemed as though squeezed from before and above.

. Obscuration of sight.

. Sparkling before the eyes.

85. Mist before the right eye, early in the morning, lasting several hours and not removed by rubbing it.

. A great, white, very bright light was seen at the side of and below the right eye. But as he turned his eyes sideways to examine it, it vanished.

Ears :—

. Dragging pain in the right ear.

. Rushing in the ears.

. Rushing and beating in the ears.

90. Ringing in one or both ears.

. Feeling of stoppage in the left ear, recurring at regular intervals, with rustling which soon changed into ringing.

. Warmth in right ear.
. Dulness of hearing, with giddiness and delirium.
. Straining pain in the right ear, which does not pass off by boring with the finger into it.
95. Pressure behind the left ear.
. Painful drawing behind the left ear, which continues a long while.
. Tingling in the internal ear, which passes off by boring with the finger into it.
. Itching stinging deep in the ear, extending from the Eustachian tube as far as the tympanum and passing off by boring with the finger into it, (after 1 h. and a half.).
. Cutting and lancinating pain in the lower cavity of the left external ear, passing off by moving the finger round it.
100. Hardness of hearing.
. Constant ringing in the right ear.
. Sensation of obstruction before the left ear.
. Constant roaring and throbbing in both ears especially in the left.
. Roaring soon changed to singing.
105. Feeling of warmth within the right ear.
. Frequent, long continued and violent ringing in the ears.
. Tickling in the left external ear.

Nose :—
. Throbbing and grinding pain in the nose, extending from the left side as far as the root.
. Violent itching in the left nostril, inviting one to scratch, with an irritation as if cold were setting in, (after 15 h.).

Face :—
110. The muscles of the face are relaxed and pale, and the eyes look sunken.
. Tearing and tightness on the left side of the face, extending as far as the ear, and into the head.
. Grinding and burning pain in the cheek, more when at rest than in motion.
. Eruption of a pimple on the left cheek, painfully smarting when touched, and emitting a watery fluid when scratched, (after 4 h. and a half.).
. White pimples in the face, especially between the eye and the ear, on the forehead and chin, characterized by some jerking when left alone, and by a smarting pain when touched, (after 4 h.).
115. Burning pain in the right corner of the mouth.
. A pustule near the left corner of the mouth, (after 2 h.).
. Twitching in the muscles of the chin, only when the parts are at rest.

Teeth and Jaws :—
. The lower teeth are painful as if the nerves were put upon the stretch.
. Stitching and throbbing pain in the right lower molares, as

if one beat upon them with a metal wire.

120. Painful looseness of a lower incisor.

. In the afternoon, violent drawing pain in all the teeth of both jaws.

. Drawing and tearing in the teeth.

. Drawing in the upper teeth of the right side, with feeling as if the upper lip was swollen.

. Sensitiveness of the incisor teeth.

125. Drawing in the lower incisors.

. Twitching pain from the left lower molares into the left arm as far as the elbow.

. Heat and swelled feeling in the roots of the right lower teeth.

: Pain in all the upper teeth.

Mouth and Pharynx:—

. Smarting pain in the mouth, in the right cheek and side of the tongue.

130. White tongue, with a feeling of roughness upon it, owing to excessive smoking.

. Rough tongue, as if sand had been strewed upon it, (after 36 h.).

. Burning upon the tip of the tongue, continuing for several hours.

. Burning on the anterior surface of the tongue.

. Sensitiveness of the borders of the tongue when eating.

135. His tongue remained constantly clean.

. Tongue moist, slightly coated.

. Burning of the under lip.

. Dryness of the throat and hard palate, as though the parts stuck together.

. Sensation in the pharynx and soft palate, compounded of roughness and burning, continuing until afternoon.

140. Constant hemming; the mucus raised had the bitter taste of the drug.

. Disgust, accompanied by scraping in the throat.

. Burning and feeling of swelling of the under lip; scraping and burning in the throat and on the hard palate (as if from pepper).

. Sensation as of a foreign body in the throat as though he had to swallow over a lump.

. Raw feeling of the palate, even between the attacks of cough.

145. Fine stinging in the throat, as if produced by an ear of corn, in the upper part of the velum pendulum palati.

. Fine, smarting stitches in the fauces, not perceptible when swallowing.

Taste and Appetite:—

. Little appetite at noon.

. Nauseous bitter taste.

. No appetite in the evening.

150. Salt taste of the mucus hawked up.

. Inclination for food was not diminished, but rather increased.

. Bitter taste in the mouth.

. Canine hunger with particular loathing for bread and beer.

. Saliva in the mouth which is tasteless as water.

155. Metallic, astringent taste on the tip of the tongue.

. Loathsome, and putrid taste, more so in the fauces than in the mouth.

. Bitterness of the mouth, four hours, (immediately.)

. Bitter taste in the mouth, after drinking beer.

. Want of appetite.

160. Diminished appetite, although the taste of the food is natural.

. Sensation of thirst in the fauces.

. Violent thirst.

. A great desire for drink, without any thirst; the mouth is constantly watery, what one drinks, tastes well, but immediately after drinking, an insipid taste is perceived in the mouth.

Gastric Symptoms:—

. Empty eructations, which cause palpitation of the heart, and a spasm of the fauces, and keep up a constant inclination to retching and vomiting.

165. Gulping up of a bilious liquid.

. Frequent hiccough, (after 1 hour and a quarter.).

. Nausea, lasting six hours, until the moment when one falls asleep; recurring early in the morning after waking up.

. Nausea, lasting eight hours, (after 5 m.).

. Frequent vomiting.

170. Vomiting of the ingesta, twice, without either bad taste or smell, (after 10 m.).

. Violent eructations lasting about half an hour.

. Empty eructation in the morning.

. Sensation of a ball as large as the fist, rising up in the pharynx, with oppressed respiration.

. Compressive sensation in the epigastrium returning at short intermissions, and passing into a sharp pinching, accompanied by slight dulness of the sinciput.

175. Eructations continued the whole day.

. Nausea, malaise after eating as though from indigestion.

. Empty eructations with burning in the pharynx.

. The gastric pains were always accompanied by pains in the face and teeth.

. Movements in the bowels with oppression of the chest.

180. Vomiting of a bitter tasting, yellow serous fluid.

. During the whole day borborygmi and empty eructations.

Stomach:—

. Pressure in the stomach, as of a stone.

. Aching in the stomach.

. Sensation of pressure in the region of the stomach, especially after a meal, with a sensation as of hunger, which cannot be relieved by frequent eating, every day.

185. Griping in the epigastric region after each meal, worse towards evening.

. He had scarcely got into bed before he experienced in the epigastric region more violent griping than he had formerly felt but which did not bring on evacuation.

. Slight flatulent inflation of the epigastric region, with pulsation in the small of the back, ameliorated by emission of flatulence.

. The pain arising from the epigastric region, when it became more severe, extended upwards towards the chest, and became then constrictive ; it was sensibly aggravated by every shock, violent hawking, and the like.

. Towards noon after a violent exercise the colic in the epigastric region returned, but less violent, accompanied by dull pain in the right temple, aggravated by treading and gloomy mood.

190. Flying pains in the left side of the epigastrium.

. Burning pain in the stomach even when eating.

. In the morning passing spasmodic pain in stomach rising up into the throat.

. Pressing pain in the right hypochondrium, at the arch of the diaphragm, oppressing the respiration.

. Continual burning pressure in the stomach up into the œsophagus during the forenoon.

Abdomen :—

195. Inexpressible colic.

. Excessive colic in a very small place below the umbilicus, extending through the whole of the abdomen, after the night-sweat.

. Violent colic, mitigated by smoking, but leaving behind it a sensation in the abdomen, as if he had caught cold ; this sensation lasts a good while.

. Pain in the abdomen, as if one had caught cold, or as if one had eaten many kinds of incongruous food.

. Colic with uneasiness in the whole of the body, both cheeks being traversed by a shuddering, which rises from the abdomen, and disappears again as soon as a more profuse sweat has broke out.

200. Continued colic extending through all the bowels, composed of pressure, and a pain as if the parts had been bruised.

. Pressure in the bowels ; it sometimes seems to come from emptiness, but is very much increased by eating, especially when stooping while sitting ; six days in succession, especially in the evening.

. Pressure in the abdomen, as if it were too full.

. Considerable inflation of the abdomen from time to time.

. Dull and tight colic, going off by pressing upon the parts.

205. Inflation of the abdomen, with emission of flatulence, and flatulent colic.

. Cramp-like colic which prevents him from sitting, or lying, or walking quietly, with tenesmus after a meal without any stool.

. Sensation as if the bowels were being squeezed in between stones, and threatened to protrude, sometimes with congestion of blood to the head and face, and sweat upon those parts; when the pains abate, those parts feel as if they were fanned by a cool breeze.

. Colic, as if the bowels were being pressed together, with cutting in the direction of the ossa pubis, this being so painful under the umbilicus, that the muscles of his face became distorted and the eyes closed; the pain was relieved by pressing upon the abdomen with the hand, and bending it over.

. A violent drawing together of the bowels in the region of the ossa pubis.

210. Increasing constriction of the bowels every ten or twenty minutes, disappearing when a strong counter-pressure is made with the hand.

. Sudden griping in the bowels, as if the hand were suddenly and violently plunged into the abdomen—this prevented him from lying down or sitting, and moreover obliged him to walk crooked; when lying quietly the pains did not abate, they did so however when briskly moving or rolling about in the bed.

. Sudden griping and pinching in the abdomen, (after 21 h.).

. Pinching pains in the abdomen, which terminated above the mons veneris.

. Pinching colic, without stool, (after 34 h.).

215. Cutting colic.

. Cutting in the abdomen, with grunting and cracking.

. Continued cutting in the abdomen, which obliges him to walk crooked, accompanied by lassitude in the whole body, making the walking difficult; and by apprehension lest he should be obliged to work.

. Cutting in the epigastrium, soon passing off.

. Periodical attacks of frightful lancination in the abdomen, coming from the region of the left kidney, and spasmodically drawing the thigh to the abdomen, so that she was obliged to bend herself as much as possible.

220. Oppressive lancinations in the epigastrium, commencing when beginning to walk, and increasing in violence at every step, (after 5 d.).

. Stitches below the last ribs.

. Stitching colic in a small place of the umbilical region, which obliges him to bend himself, and is mostly aggravated by lifting something, (after three quarters of an h.).

. Boring pain in the left groin, close to the pelvic bones.

. Grinding and tearing colic in the umbilical region more violent when breathing and laughing aloud.

225. Pain of the bowels as if they were bruised, mostly perceptible when walking or sitting crooked.

. Motion in the abdomen, in the afternoon, as if he were yet fasting, (after 8 h.).

. Emptiness in the abdomen, as if nothing were in it.

. Emptiness in the abdomen, as after a violent diarrhœa.

. The colic was relieved by drinking a cup of coffee.

230. Colic and sudden stool, after taking the least nourishment, a single potato.

. Constant pressure in the pubic region, (after 8, 10 h.).

. Tight pain in the right groin, more violent when pressing upon it.

. Pain in the groin, as if hernia would protrude; when pressing upon the groin, there is a pain as if a hernia were being reduced; this symptom lasts half an hour, in the afternoon, and occurs again the next day at the same hour.

. Pressing from both sides of the hypogastrium towards the middle of the groin, resembling incarcerated flatulence, and producing a desire to emit the semen.

235. Excessive cuttings and lancinations in the bowels brought on by incarcerated flatulence, and rousing one from sleep at night.

. Continual grunting and croaking in the abdomen as of frogs.

. Incarceration of flatulence.

. Illusive inclination to emit flatulence; afterwards a considerable quantity was emitted.

. Frequent emission of noisy flatulence.

240. Immediately after dinner violent cutting in the hypogastrium forcing him to stool and a fluid evacuation.

. Rectal tenesmus.

. Cutting in the abdomen and tenesmus disappeared when he got warm in bed.

. He slept well and felt well on waking while in bed but soon after rising he had a fresh attack of the umbilical colic and frequent eructations.

. Violent griping in the umbilical region lasting all day.

245. Feeling of coldness in the abdomen, looseness of the bowels.

. Discharge of blood from the anus, with violent sticking and burning pain in the small of the back and anus.

. At half past one p. m. umbilical colic, with painful stitches in the bladder and subsequently alternately in the rectum, disappearing on discharge of flatulence.

. Umbilical colic accompanied by transient headache.

. Woke with a slight griping around the navel.

250. Loud rumbling in the intestines with discharge of inodorous flatulence.

. Griping around the navel increased by eating fruit.

. Constrictive pain in the umbilical region, last half of an hour and which waked him from sleep the following morning at 3 a. m.

. In the forenoon griping around the navel; after dinner with a little wine the griping and urging increased and an almost formed stool followed accompanied by slight tenesmus.

. Stitches penetrating deep in the abdomen.

255. Isolated deep stitches as if from a needle, sometimes in the right flank, apparently connected with the ovaries.

. On the left side of the navel colic, only perceptible when walking, disappearing when standing still.

. Rumbling in the abdomen and deep seated pulsation in it when lying down, not perceptible to the hand laid upon it.

. Towards noon, colic appearing only when walking, disappearing every time he stood still.

. The bowels were painful on strong pressure on the abdomen, as if excoriated ; unusual thirst.

260. The sensitiveness of the abdomen continued all the evening accompanied by thirst and early sleepiness. while reading.

. Towards noon when walking symptoms of colic, with inflation of the abdomen, (the clothes became too tight.)

. In the afternoon continued sensitiveness and griping and commotion in the abdomen for several hours.

. The abdomen continued tender and inflated even after evacuation.

. The moisture, in the perineum continued during the forenoon.

265. Continued tensive pain in the bowels ; it seems as if they were gathered together into a ball, had fallen down and were lying like a heavy weight in the hypogastrium ; it appears as if the anterior parieties of the abdomen were wanting, and the bowels were in danger of falling out.

. Occasional pressing at the anus, as though a quantity of fæces were about to be discharged, with the escape of only a little mucus.

. Diffusion of a general warmth, which seemed to deprive the limbs of strength.

. A violent pressure suddenly set in upon the bladder, which was full, but as rapidly passed off on the expulsion of considerable flatus in rapid succession, which drove before it some mucous fluid.

. Movements as if from the breaking of large bubbles in various parts of the abdomen.

270. Violent attacks of colic for two succeeding nights.

. Feeling of emptiness and soreness in the bowels.

. Clucking in the inner side of the groin.

Stool :—

. Frequent and violent desire for stool, with sensation in the anus and lower part of the rectum, as if these parts had become weakened and relaxed by chronic diarrhœa.

. He has to make great exertions in retaining the stool in order not to let it escape before he reaches the closet.

275. Violent desire for stool, the stool being copious, yellowish-brown, somewhat thin, as if brought on by a purgative and having a sourish, putrid smell ; the colic disappears for a short while after the stool.

. Expulsion of a small quantity of tenacious and slimy stool.

. Hard stool with some bearing-down.

. Hard stool, coming off in pieces, (after 5, 6 d.) (reaction ?).

. Diarrhœa, day and night, without being able to vomit.

280. Diarrhœa, fifteen evacutions in eighteen hours, the colic gradually abating after it.

. Greenish-yellow diarrhœa, with a sensation as if he had caught cold.

. Thin, foamy, brown, yellow stool, having a mouldy smell, looking almost as if it consisted of burnt gray blotting paper (after 12 h.).

. Stools which are first watery and slimy, then bilious, and lastly, bloody.

. Bloody stools.

285. Dysentery.

. Hæmorrhage from the rectum.

. Fatal dysentery.

. Violently itching stitch in the rectum between the stools.

. Pain in the lower part of the rectum, of distended varices, when sitting, walking, or during stool.

290. Blind hæmorrhoids.

. Two pappy stools a day, with slight griping in the epigastric region.

. Two pappy stools, one in the evening, the other next morning, and abundant urination.

. Itching in the anus all day.

. Cutting in the hypogastrium forcing him to stool and a fluid stool.

295. Fluid stool after eating, with discharge of flatulence and painful feeling in the abdomen, which was only removed when he got warm in bed.

. Cutting in the umbilical region and tenesmus.

. Increased sensitiveness of the whole abdomen and constipation.

. Half watery half solid evacuation, violent griping in the stomach coming on in paroxysms and disappearing after dinner.

. Feeling of weariness in the small of the back and a viscid, soft scanty stool every three days.

300. Colic with violent rumbling as if from bursting of large bubbles.

. The usual normal stool was soon followed by one of pappy consistence and consequent burning in the anus, and at the same time prickling in the orifice of the urethra after urinating.

. Soon after dinner, when walking in the open air, oozing at the anus and discharge of moisture from the rectum instead of the expected flatulence. The oozing continued the whole afternoon; at 6 p. m. another pappy stool with much mucus and subsequent burning at the anus.

. Slight burning and moisture at the anus, as if after diarrhœa.

. Immediately after dinner a pappy stool with horripilation over the head and back; soon afterwards (when lying down) pain and rumbling in the abdomen with urging to stool and horripilation over the whole body; half an hour later a watery stool with griping followed by continued, almost irresistible tenesmus.

305. Stool, soft, pappy, leaving behind tickling in the rectum; another pappy stool after eating, with subsequent burning of the anus, cramp in the left calf.

. Burning at the anus.

. Two abundant, first pappy, then fluid evacuations, with ulcerative pain the bowels, ameliorated by bending forwards, aggravated by an upright position.

. Yellow pappy stool accompanied by colic.

. At 6 p.m. when walking, an unpleasant sensation about the navel, as if after taking cold, with urging to stool which he was obliged immediately to attend to, as the sphincter showed no resisting power. The discharge was thin, orange-coloured and pappy.

310. On the cessation of a long continued tenesmus, a free protracted discharge took place, the sphincter standing wide open as if paralysed.

. Semifluid stool followed by a perfect storm of flatulence.

. The evacuation which began knotty and dry, ended in a diarrhœa.

. Three hours after, violent pinching in the umbilical region, and strong irresistible inclination to stool, a scanty brownish red evacuation with painful tenesmus, lasting some ten minutes.

Urinary Organs :—

. Retention of urine.

315. Scanty secretion of urine, (after 1 h.).

. Tenesmus of the bladder, without any emission of urine; the urine being generally emitted in small quantity.

. Tenesmus of the bladder, with pressure upon the pubic region (after 8 h.).

. Emission of urine, immediately, of an intolerable smell; after standing a little while, it became thick, glutinous, of the consistence of jelly, like coagulated albumen.

. Aching in the orifice of the urethra immediately after urinating, as if it had been contused, (after 14 h.).

320. A tearing, resembling a stitch, darted through the urethra.

. Increased secretion of urine.

. Copious secretion and discharge of clear watery urine during whole day.

. Repeated urging to urinate.

. Burning in the urethra after urinating.

325. Urgency to urinate.

. Frequent urination.

. Burning in the orifice of the urethra on the passage of the last few drops.

. Increased discharge of watery urine.

. The urine presents a very striking similarity in appearance to that in dropsy after scarlatina. It is of a faint flesh colour, deposits a light brown, flocky, unequal, translucent sediment, and upon the vessel, small hard and solid reddish crystals which adhere so strongly, that they are not easily removed by water.

330. The urine passed during the day is somewhat lighter coloured than that towards evening, night and morning.

. Sensation of tenesmus in the urethra and rectum after urination.

. Urine fiery, becomes cloudy on standing.

Male Genital Organs :—

. Painful tearing in the glans.

. Painful jerks in the right testicle.

335. Painful retraction of the testes.

. Priapism.

. Violent sexual desire, with erections.

. Complete impotence ; the prepuce remained in a state of retraction behind the glans, although the sexual desire was not altogether wanting.

. Severe drawing pain in the left testicle.

340. Pinching at the end of the glans.

. Exceedingly increased sexual impulse for several days.

. Frequent erections.

. Congestion towards the genital organs, especially the scrotum, with feeling of heat and persistent burning in a small spot upon the same, without erections.

. The right testicle and particularly the epididymis, was considerably swollen and painful to external touch.

345. Cramp pain in the penis which lasted several minutes, during which it seemed as if it were bent double.

. Crawling in the penis with sexual desire.

Cold, Catarrh :—

. Fluent coryza, early in the morning, without sneezing.

. Feeling as if from an incipient catarrh.

. Fluent coryza, constant and uncommonly violent, with constant dropping from the nose, worse in the open air than in the room.

305. Chills after eating, especially in the upper arms, as if at the commencement of a catarrh and repeated yawning.

. Sneezing followed by dryness of the nose.

Larynx :

. Towards evening irritability of the larynx, voice rough and hoarse,

. Constriction of the larynx, which lasted all day.

. Frequent titillation in the larynx, causing a dry cough ; that place in the larynx, where the titillation is felt, feels more raw or scraping when breathing.

355. Distressing dryness of the air passages.

. Short and hacking cough, when smoking, in the evening.

Chest :—

. The breathing becomes twice as short, for several days, without any asthma or heat.

. Attack of asthma, at night, with slow, heavy breathing, which compels him to cough.

. Considerable oppression of the chest when breathing, as if caused by pressure from without, accompanied by stitches in the chest.

360. Oppression of the chest as if it were pressed into too narrow a space, with compression on both sides, especially when stooping while sitting on a chair, and in the evening, for six days.

. Wheezing in the chest, when breathing, early in the morning, (after 1 h. and three quarters.).

. Dull stitches during an inspiration ; slight pressure in the chest during an inspiration, for six days.

. Pressure in the centre of the sternum, as if something were pressing upon the lungs.

. Aching, with dull stitches in the pit of the stomach, which obliges one to breathe hurriedly ; it seems as if the lungs could not expand sufficiently.

365. Single stitches in chest and below the ribs, at different places, every day.

. Twitching in the regions of the fifth and sixth left ribs.

. Palpitation of the heart.

. Griping pain in the right intercostal muscles.

. Jactitation of the right intercostal muscles, which passed off when raising one's self, (after 5 h.).

370. Formication in the left pleura and the peritoneum.

. Occasional cough, accompanied by scanty, easily raised expectoration.

. Chest sometimes painful and oppressed, at times dry cough.

. The cough which came on occasionally, produced violent stitches through the cerebellum.

. He coughed frequently during the early part of the morning, and raised without difficulty a thick yellow mucus, but had no pain, either in the throat, chest or head.

375. Loose cough.

. Short, hacking cough excited by tickling in the throat.

. Feeling of rawness in the throat and cough.

Back :—

. Painful lassitude in the small of the back and lower extremities.

. Pain in the small of the back.

380. Pain in the back, over the hips, with nausea and chilliness.

. Tight pain with a sensation as of stitches in the right loin, perceptible only during an inspiration, and most violent when lying upon the back.

. Tight and stitching ache between the scapulæ, which is most violent when walking, so that he was obliged for a while to walk crooked.

. Dull stitch below the right scapula, during an inspiration.

. Aching in the lower part of the back as if it had been bruised, with hard pressure in the pit of the stomach, uninfluenced either by rest or motion.

385. Drawing pain behind the right scapula, as if the nerves and

vessels were put upon the stretch.

. Violent and drawing pain extending from the right side of the neck across the scapula, as if the nerves were violently pulled and stretched, or as if the parts were bruised.

. Soreness in the left scapula, when at rest.

Neck :—

. Drawing pain, being a sort of contraction, in the left cleido-sterno-mastoideous muscle; during motion and when walking, the pain moves towards the back part, and then disappears entirely.

. Stiffness of the left side of the neck, painful to the touch.

390. Violent, tightly drawing pain in the muscles of the left side of the neck, worse during motion.

. Painful drawing in the nape of the neck, even when at rest; soon after, stiffness of the nape of the neck, painful of itself, and more so when moving the head.

Superior Extremities :—

. Swelling and suppuration of the axillary glands.

. Behind the scapula the left arm is painful as if it had been sprained, both when at rest and in motion.

. In the night when lying in bed, drawing in the right shoulder.

395. Drawing and tearing in the right shoulder joint in the morning lasting all day.

. Tearing in the left shoulder.

. Cramp pains in the muscles of the left wrist.

. Frequently repeated stitches from the left axilla down to the elbow.

. Drawing aching in the long bones of the arms, when at rest, especially below the heads of the humeri, and above the wrist-joints; in these parts, the periosteum seems to be painfully affected, when raising the arm.

400. Occasional stitches in the arms, alternately in various places, (after 4 h.).

. Paralytic pain in the arms, occasionally (after 5 d.).

. In the right side of the upper arm one experiences a pricking and burning pain during motion.

. Tearing drawing in the left arm down to the finger-joints.

. Paralytic weakness of the right forearm while writing.

405. A fine and itching stitch in the bend of the right elbow, when at rest.

. Tight pain in the right fore arm (after 27 h.).

. Numbness of the right forearm.

. Spasmodic pain in the palm of the hand; he had great pain in opening his fingers; it was more violent during rest than motion.

. Violent drawing pains in the right thumb, apparently in the tendons, commencing in the ball and disappearing in the tip of the thumb, (after 5 h.).

410. Burning pain in one point of the right middle-finger.

. Feeling of stiffness in the hands.

. Tearing in the joints of the left hand.
. Repeated tensive pain in the left thumb.

Inferior Extremities:—

. Titillation in the left glutei muscles, when sitting, (after a quarter of an hour.).
415. Moderate tension in the region of the anterior spine of the ilium of the left side.
. Tensive feeling confined to one point, changed into a violent drawing, extending from the spine of the ilium to the inguinal region and the upper third of the inner surface of the thigh.
. The lower limbs were painful as after a forced march and a tearing sticking pain encircled the right internal malleolus.
. The right thigh is painful, only when walking; as if the psoas muscle were too short, (after 32 h.).
. Drawing tightness in the right thigh.
420. Lancinating tearing in the thighs, when sitting, (and standing).
. Tearing and drawing in both thighs.
. Painful tension on the flexor side of the joints, especially of the groins and the knees.
. Drawing in the inner side of the left thigh as far as the flank.
. Drawing in the external condyle of the right femur, but especially in the knees, on motion.
425. Drawing in the right knee joint in the forenoon, and on this ceasing, drawing in the right thigh.
. Threatening of cramp pains in both knees, with feeling of stiffness.
. Pricking pains in the bend of the knee; they finally became an itching stinging.
. Feeling of coldness in the knees, which are nevertheless warm.
. Heaviness in both knees.
430. Paralytic pain in the knee, when walking, as if it had been tied fast in the joint.
. Violent itching in the bend of the left knee, which forces one to scratch, the scratching being followed by smarting, (after 14 h.).
. Painful feeling of tension in the left patella in the evening.
. Pain in the patella so considerable that walking was painful.
. Patella hot and somewhat swollen, with an indistinct pulsation in the swelling.
435. Pressing throbbing pain in the upper part of the inner side of the right leg, extending to the posterior side of the thigh upward towards the ischium (when sitting and walking).
. Tight pressure upon the tibiæ, even when sitting.
. Cramp in the legs.
. Cramp in the muscles along the tibia, at night, towards morning, increased by bending the knee.
. Violent cramp in the calves, especially after an embrace.
440. Twitching in the right calf, when at rest; the symptom passed off during motion.

. Tearing pain in the calves, when sitting or standing.
. Sharp cutting in the left calf; on the inner side, when at rest.
. Itching stitch in the right tibia, most violent when at rest.
. Itching stitch in the right leg, also, during motion.
445. Itching stitch in the right calf, not passing off by scratching.
. Tearing in the left calf as far as the heel.
. Dull stitches in the left leg.
. Weakness of the legs, as if they were tired.
. The varices of the leg, which had been painless heretofore, become painful.
450. Pressure and tearing in the ankle joint, when sitting.
. Tearing in the sole of the right foot, most violent when at rest.
. Violent tearing in the dorsum of the left foot from below upwards.
. Tearing in the periosteum of the os calcaneum.
. Itching and boring stitch in the dorsum of the right foot, most violent when at rest.
455. The left foot goes to sleep, when at rest.
. Tremor of the feet as after a violent fright, with shuddering.
. Tearing pain under the nail of the left big toe.
. Pain in the ankle coming on when walking, as if from a false step, ceasing when at rest.
. Feeling of numbness, swelling and heat in the left foot, which gradually encroaches upon the whole leg, with itching sticking, and lasts for a considerable time.
460. Increase in size of both feet, so that all his boots were too small in the instep.
. A swelling on the right edge of the tarsus, soft, pale, painless, clearly circumscribed, and as large as a pigeon's egg, appearing like a lymphatic tumour.
. Burning sticking and sensation of warmth on the dorsum of the right foot.
. Pressing digging pain in the external side of the second toe of the left foot.
. Sudden cramp pain in the right great toe in the evening, extending towards the metatarsus which was swollen.

Sleep:—

465. Drowsiness and want of disposition to intellectual labor.
. Unconquerable drowsiness and inclination to lie down, with continual impatience in the limbs, especially the lower, when asleep.
. Uneasy sleep, he tosses from one side to another.
. Sleeplessness, the whole night; he is occupied in a calm and dispassionate manner with thoughts and reflections on his circumstances and the things of life.
. A kind of flatulent colic about midnight; the flatus appear suddenly in different places, repel each other and seem to be incarcerated.
470. He almost always sleeps on his back; one hand under the occiput and one arm above his head.
. Night-sleep interrupted by many dreams.

. Vivid, not anxious dreams ; they become so vivid that they rouse him up.
. Vivid, anxious dreams.
. Dreams full of fatiguing thinking and mental exertions.
475. He dreams about a variety of things.
. Lascivious dreams with pollutions, without however any erection, when lying upon the back.
. Lascivious dreams without any pollution, disturbing sleep.
. Lascivious dreams with excessive erections without any pollution.
. Lascivious dreams and pollution.
480. At night a succession of light, imaginative, pleasant dreams.
. Waking after midnight, he perceived, as he lay on the right side, pressure and weight in the left side of the forehead, which felt otherwise well.
. Heavy sleep full of dreams ; dulness in the morning, with late waking and dislike to get up.
. Restless sleep at night, vivid dreams, frequent waking, apparently produced by the continual painfulness of the umbilical region.
. Before midnight, during a restless dozing, voluptuous dreams and a pollution, during which he awoke ; on waking, tearing in the left tibia and ankle.
485. At night very sound sleep.
. Sleep after midnight undisturbed.
. Sleep disturbed by frequent waking.
. Wakes in the morning with colic and tenesmus, and has every day several thin pappy stools.
. During the night, he had a pollution, a very unusual occurrence with him.

Fever :—

490. Coldness of the whole body.
. Icy cold hands in the evening, with warm feet.
. Feeling of icy coldness in the soles of the feet, although they are not cold.
. Violent chilliness.
. Shuddering through the whole body, early in the morning after rising, with coldness of hands, heat of the face and remainder of the body, without any thirst, (after half an hour).
495. Thrills of warmth over the whole body, which feels likewise warm to the touch.
. Warmth of the face early in the morning after rising, with icy coldness of the hands and tips of the fingers.
. Feverish heat.
. Night-sweat.
. At night, violent sweat about the head, hands, legs and feet, smelling like urine.
500. Morning-sweat on the legs.
. Slow, full pulse, (the first 10 hours.).
. Quick and full pulse.
. When lying still, he feels the beating of the heart and the ar-

teries in the whole body.

. General hot flush, especialy on the face, with sweat on the forehead.

505. Heat, especially in the upper part of the body.

. Once when he awoke in the night, he felt an unusual warmth over the whole body, but especially in the lower limbs.

. Violent feeling of heat rising from the abdomen towards the chest, ending in partial sweat upon the abdomen and the chest with prickling and oozing from the anus, and very copious discharge of urine.

. Profuse perspiration over the whole body, every night towards morning.

. Pulse over 90.

510. Accelerated pulse, dull head and eye-ache, increased thirst, no stool.

. Pulse 100, sleep excessively restless.

. At first, dry heat, then some perspiration.

. Increased temperature of the skin; pulse 90.

. Awoke several times and always found himself in a profuse perspiration.

515. He was troubled the whole afternoon with a disagreeable feeling of chilliness, great debility, unusual want of temper.

Skin :—

. Tickling itching on the right arm disappearing on scratching.

. Itching in different spots, especially on the left side of the body, which smart like burning points.

. Prickling in the region of the right cheek-bone, though an eruption was coming out.

. Furuncular eruption on the face.

520. Itching of the whole body, as after violent sweat, especially of the chest and abdomen; early on waking up and after rising, (after 26 h.).

. Troublesome itching, in the afternoon and evening, with subsequent sweat.

. Smarting itching in various places in the evening, when in bed; it is relieved only for a short time by scratching, and finally becomes a sort of uneasiness (impatience) which obliges him to move his limbs continually, without being able to fall asleep, (after 32 h.).

. Itch-like eruption.

. The skin of the whole body scales off.

525. Constant burning pain in the boils.

General Symptoms, Weakness, Fits :—

. Perceptible and disagreeable feeling of fatigue in the affected parts.

. Excessive disposition of the muscles of all the parts of the body to become painfully contracted as by cramps.

. Contraction of all the limbs.

. Jactitation of some parts of muscles in the limbs.

530. Long lancinations in the whole body, in the head, back, abdomen

and limbs.

. Complete failing of strength.

. Sticking pressure in various parts of the body.

. Some swelling of the abdomen about the navel, accompanied by slight dulness of the head in the forehead and temples, and a return of the vexatious thoughts which he had forgotten, but which soon yielded to an unusual cheerfulness.

. In the morning, soon after waking, sticking pains now here, now there.

535. Pulsation in the whole body, most perceptible in the back and left side of the chest

. Prickling and crawling on different parts of the body.

. The headache and pains in the knees and feet, came on daily at 8 a. m.

. Stitches when walking, from the small of the back to the groin, and a hard tread caused pain in the right testicle, so that at last he feared to move about.

. In the morning depression and weariness of the whole body.

540. In bed, painfulness and feeling of heat along the whole spine.

. Fainting fit.

. Fainting fits, with coldness of the external parts.

. Deadly swoon.

. Lassitude in all the limbs when walking in the open air as after a distant journey, with great heaviness of the legs and trembling; especially of the right leg, sweat breaking out over the whole body, (after 11 h.).

[**Peculiarities** :—

Remission, night and morning.
Pred. worse in open air.
" " in cold weather.
" " from cold diet.
" " from sour things.
" " when sitting erect.
" " when lifting diseased limb.
" " when lying on back.
" " when stooping.
" " after stool.
" " while standing.
" better in doors.
" " from warm diet.
" " from coffee and smoking.
" " when letting diseased limb hang down.
" " when lying on side.
" " after sweat.
" " from rubbing and scratching.
" " from drinking cold water.
" " when standing still after moving.

Ailments from shame, grief, and from vexation with indignation, or reserved displeasure.

Ailments from Causticum and plumbum.—Gross' *Comp. Mat. Med.* by Hering.]

EDITOR'S NOTES.

Cervical Ribs in the Human Subject.

Mr. Holmes Coote has recorded, in the *Medical Times and Gazette* for January 1854, the case of a Chinese skeleton, in which the twelve ribs were attached to the twelve middle vertebræ, the first being attached to the last cervical, instead of to the first dorsal vertebra. In the *Glasgow Medical Journal* for July current, Mr. H. E. Clark relates the case of a skeleton in which "on the right side there were twelve ribs, eleven of which were dorsal and one cervical. The latter of these was complete, but was narrow and round; it performed functions of a first rib. On the left side there were only eleven ribs, the first being much broader than usual, but otherwise presenting nothing peculiar; there was also on this side a rudimentary rib attached to the last cervical vertebra."

A New View of Imponderables, and of Veritable Simple Bodies.

M. E. Martin has been led by his researches to the following conclusions:—

(1). That the two electricities are not *forces*, but imponderable *bodies* endowed with powerful and different chemical affinities, and that they do not act as physical forces, but that they effect upon the elements of the water a double chemical action, which transforms them into gas.

(2). That there is an error as regards the constitution of water, which does not include, as is pretended, two condensed gases that have only to be separated to reproduce them, but that the single simple bodies H and O, are its elements.

(3). That the two gases, whose combination produces water are *compound* bodies, formed by the chemical union of positive electricities to the simple oxygen body, and negative electricity to the simple hydrogen—the combination of these bodies giving two binary bodies, water and caloric.

(4). That the battery currents do not traverse the acidulated voltameter liquids, and do not effect the transport of the elements, but that the two electricities simply arrive at the electrodes, and there unite with the elements of the water in transforming them into hydrogen gas at the negative pole and oxygen gas at the positive pole.

In fact M. E. Martin looks upon all bodies—ponderable or not—appreciable by physical and chemical properties as material. *Light* has physical and chemical properties. *Heat* obeys the physical laws which regulate elastic fluids, and combines in definite proportions with ponderable bodies when it transforms them into liquids or vapours. The *Electricities* have physical properties, in that they course, penetrate, and shatter obstacles; and they have powerful chemical affinities.

PERUVIAN BARK.

We find the following, bearing somewhat on the history of Peruvian Bark, in the *Calcutta Gazette* of April 27, 1820, which takes it from the *Journ. de Pharmacie* of May 1819 :—

A FRENCH Merchant, called M. Delpech, who possessed a rich house at Guayra, the port of the Caraccas, had stored up in 1806 a very considerable quantity of Cinchona, newly collected. This bark filled several apartments upon the ground-floor. There prevailed at that time in Caraccas a fever of a very malignant character. M. Delpech had occasion to receive several travellers, inhabitants of these countries, and to entertain them with the usual American hospitality. The apartments destined for visitors being filled, and the number of his guests increasing, he was under the necessity of putting several of them in the rooms occupied by the Cinchona. Each of them contained from 8 to 10 thousand pounds of that bark. The heat was much greater in these rooms than anywhere else in the house, in consequence of the fermentation of the bark, which made them very disagreeable. However, several beds were put into them, one of which was occupied by a traveller, ill of a very malignant fever. After the fist day, he found himself much better, though he had taken no medicine ; but he was surrounded with an atmosphere of Cinchona, which appeared very agreeable to him. In a few days he felt himself quite recovered, without any medical treatment whatever. This unexpected success led M. Delpech to make some other trials. Several persons, ill of fever, were placed successively in his magazine of Cinchona, and they were all speedily cured, simply by the effluvia of the bark.

In the same place with the Cinchona, he kept a bale of coffee, carefully selected for his own use, and likewise some large bottles of common French brandy. They remained for some months in the midst of the bark without being touched. At last M. Delpech, when visiting his magazine, observed one of the large bottles uncorked. He suspected at first the fidelity of a servant, and determined to examine the quality of the brandy. What was his astonishment to find it infinitely superior to what it had been. A slightly aromatic taste added to its strength, and rendered it more tonic and more agreeable. He uncorked the other bottles, which had undergone no alteration, but which, by being placed in the same circumstances, soon acquired all the good qualities of the first bottle.

Curious to know if the coffee had likewise changed its properties, he opened the bale, and roasted a portion of it. Its smell and taste were no longer the same. It was more bitter, and left in the mouth a taste similar to that of the infusion of bark.

The bark which produced these singular effects was fresh. Would the Cinchona of commerce have the same efficacy ? This is a question that can be answered only by experiment.

THE BURDWAN FEVER.

PREVENTIVE MEASURES.

In proceeding to treat of the preventive measures, one might well breathe a desponding sigh at the hopelessness of the task. It is said that to know the disease is half the cure, and when we have fixed definitely on some cause out of the numerous factors that bear some share in the origin of the disaster, it might appear that the amelioration of the evil is not much beyond our power, but the cost it would entail to set the likely remedy to action seems at first an overwhelming obstacle in the way. Virtually, the physical aspect of the country will have to be changed and the habits and mode of living of the people will have to be altered, before any amelioration can be expected; for so long the Hindu remains a Hindu with his peculiar filthy habits, always acting in opposition to all sanitary laws, so long would the permanent improvement of the health of the people remain a mere phantom. The Government have shown their backwardness in undertaking the necessary operations on the score of the uncertainty that may await the result, but it may be safely declared that the capital, sunk in the land for its general improvement, is sure to be productive of benefit in the end.

Before describing the methods of prevention we will compare the actual condition of those villages within the affected area where the visitation of the epidemic has been milder and less fatal, and try to deduce therefrom our plan of action. I have before mentioned that complete indemnity from illness has been nowhere observed within the area of my inspection. But the places I am going to narrate fared so well in comparison with the others that it will not be far from the truth to call them as having escaped the ravages of the epidemic. Three of them, Sankta, Dhamuaree, and Soobulda, lie on the western side of the Damudah, in that tract of the country in Mauah Roynah which is annually inundated by the overflow of the river during the rains. They stretch along the western side of the Bachoordah khal. Since the northern side of the Damudah has been secured by embankment to give protection to the railway line, the southern has been opened out at Hijulnah, Bago, and Sreekristopore to give exit to the periodical overflow. This part of the country therefore has been recently subjected to flooding. The body of water rushing in through the breach at several places above mentioned spreads over fields and villages, and washing an extent of land no less than 3 miles in breadth, flows due south to discharge itself again into the river further down in its course. The bulk of this water subsides within 48 or 72 hours, but the fields remain submerged for 3 months. The amount of sand thrown up has rendered the ground unproductive except at places where silts of an alluvial nature have enriched the land with manure and rendered it fit for a profitable cultivation of melons, pumpkins and tobacco. This is undertaken immediately after December and is over in May. Rice fields have deteriorated and its cultivation abandoned. It is pitiable to see what an immense tract of land has thus been rendered fallow and has been overgrown with long grasses and reeds. From July to September the whole of it is under water to the depth of 2 to 3 ft., so that the people ply across in canoes and rafts. The Bachoordah khals which consist of several distinct channels in communication with the main stream carry strong currents of water and are deep enough to allow boats of 100 mds. capacity to pass with impunity. Remaining under water for the whole of the rainy season the tract of country has received the name of jullah or marsh. After September the water begins to subside from the face of the fields but the deeper channels of the khal continue full though fordable. Most of them dry up in December, and the whole then presents a dry sandy soil where the grasses grow luxuriantly. The delay in the subsidence of water is attributed by the villagers with some truth to the gradual filling up of the bed of the khal opposite Jotseram where indeed scarcely a channel is left, but the force of the inundation makes for itself each year a fresh passage. The inundated fields have risen in their level by each year's increment and the encroachment of the water has become wider spread. Yet with all this they dry up sooner than the neighbouring rice fields which remain wet till February. Lying within this circle of inundation are several scattered villages where the inhabitants have been struggling against nature to maintain a precarious footing. For the protection of property and person, they have year after year raised the level of their villages and of the floors of their houses by addition and deposition of earth. Thus in the villages of Dhamuarce and Soobulda the floors of huts are no less than 10 or 12 ft. high from the level of the surrounding fields. The construction of huts is by no means peculiar excepting that the majority of them are isolated. All these are small and thinly populated though the number of inmates in each house will not fall short of what takes place in other populous villages. They are peopled by the farmer class and their condition is anything but thriving, owing to the deterioration of the productive powers of their land, notwithstanding which they have to pay to their Zemindars unmitigated rent of the year. Their mode of living is not different from their brethren of other villages except that during the period of flood they have to live as they say from hand to mouth.

Whilst the inundation has brought upon them these distresses, it has improved the appearance of their villages by its general effect of scouring. It cannot be denied that these villages look neater and more tidy. Everywhere vegetation and filth are washed away and the filling up of the tanks replenishes their water and clears them of aquatic weeds. In some of these places I tasted of the best water that I have ever drunk. Thus the overflow of the river acts indirectly in promoting the sanitary condition of the villages through which its water flows. I have premised that the villages bodering on this line are, as a rule, healthier and have presented less mortality than those in their immediate neighbourhood. But amongst them again various shades of gradation are observed. Thus Goonore, a village removed only a mile from Sankta, presented an opposite state of health. It scarcely differed in any material way in the local advantages it enjoyed, excepting that it was larger and more populated, and situated more on the bed of the khal than on its side.

There are other villages in this neighbourhood, situated between this khal and the river Damudah, which are older, larger and more populous, such as Sreekristopore, Jotseram, Rajarampore, Shadepore, &c., but the amount of sickness and mortality in them exceeded much in proportion. Most of them are also under water in the flood season, but the water rises in them by a process of slow filling up and it as slowly subsides. The result is therefore totally different. The water of the tanks is simply undrinkable and full of aquatic vegetation. The soil is most jungly, and shrubs and under-woods abound. A more uncleanly state of villages cannot be imagined.

Besides, the drainage of these villages is obstructed. The body of inundation water passing in at Hijulnah is met by another of greater force and velocity that finds its way in at Bago. The striking of the two at right angles to each other neutralises the current and causes stagnation higher up the stream. The fulness of the stream in its turn prevents other minor khals from draining themselves into it freely and thus surcharges the villages with moisture of which they are the drainage media. The cultivation of pumpkins, melons, &c., I have previously referred to, is undertaken only at this portion where the stagnation of water favors deposition of silts. The resulting force of opposition turns the course of water more towards the west when it resumes its natural direction a mile or two below the spot. Where the current is strong the bed is deepenend year after year and thus the height of the villages contrasted with the level of the fields becomes more marked.

In the Mungulcote circle Dr. B. Gupta has come across a tract bordering the Adjye where similar conditions are obtained.

The overflow of the river, the drainage of the surplus water by a khal running parallel tô it, and the immunity of villages on its inland side are too significant facts to be overlooked. In the newly affected area on the S. W. district of Burdwan I found out a small village Ramkantpore where out of a population of 50 or 60 not one was a regular subject of fever. They were living on a high elevated soil which sloped towards a running stream.

From the foregoing facts the following conclusions may be drawn.

1st. The main distinctive condition of villages that have been less threatened with malaria and death is their newness and scanty population.

2nd. All of them are seated on an elevated soil, either natural, or made artificially so to subserve a special object. The greater the difference between the elevation and the general surrounding level, the more striking is the improvement.

3rd. They are more tidy in their appearance, present less jungles and enjoy better sanitary conditions.

Having the foregoing facts in view, we should attempt to improve the sanitary condition of villages as well as of their surroundings. Any improvement in the dwelling of the people will indicate improvement in their social condition which in the present state of society is well nigh impracticable. Jungles should be cut down and growth of bamboo in thick clusters prohibited. Small honey-combed pits should be filled up and the existing large tanks cleared and deepened. Those, that are used for drinking purposes, should be surrounded with high mounds to prevent them from being defiled with ground washings. Surface drains should be cut in every locality with a good outfall, leading into a deep one on the farthest boundary of the village towards which the drainage inclines. These drains or khals joined with similar others in the neighbourhood should have their ultimate fall into a navigable stream. The dead should be buried or burnt out of the limits of human habitations.

Outside the villages the fields should be looked after. A country prosperous with rice cultivation cannot be healthy. If water be allowed to collect in every patch of ground, it will necessarily impregnate the soil with dampness. But rice is the staple article of food and there is no alternative with the production of the crop. A thorough system of irrigation should be introduced which will render it unnecessary for the present to attempt to keep water in the fields. Rice cultivation within the heart of a village should be prohibited.

Any existing obstruction to drainage by bunding a canal either for fishery or agricultural purposes should be put a stop to on penalty of a fine, and the existing bund opposite Selimabad should be opened out to restore the flow of water into the Kana Nudee. The mouth of small khals are to be kept open, otherwise once obstructed they will fill up gradually and turn the flow of water in a different channel.

Deep khals should be cut in jullahs to convey the stagnant water, and some sort of cultivation introduced.

The habits of the people must be altered. A better standard of living is an indispensable necessity. Better clothing and better food will enable them to bear against malaria or any vicissitude of temperature with greater power of resistance than before. The habit of defæcating on the pond side should be discontinued; grounds should be allotted outside the village for such purposes, and the dry earth system of conservancy adopted. The refuse in time should be carted away to the neighbouring fields to supply manure to the soil. The custom of early marriage giving rise to a generation of paupers, whom their parents are not able to sustain, should be discouraged as much as possible.

If all these measures could be followed out, my conviction is strong on the point that we will reduce the chance of disease and mortality to a minimum. Yet some degree of unhealthiness will remain in operation which is the result of causes beyond human control. Thus, the nature of the soil will remain unaltered which is sure to be acted upon in the rainy season with the immense quantity of rainfall which is natural in the tropics.

PATHOGENETIC ACTION OF THE COBRA POISON.

Our readers will remember we commenced experiments on this important subject as early as 1868, and recorded them, few and imperfect as they were, in the 4th No of our first volume. We promised to go on with the experiments, and for a variety of reasons, not the least of which was a horror of unnecessary cruelty, we could not fulfil our promise. Dr. Joseph Fayrer, who had commenced before us, has since made a very large number of experiments, varying them in a variety of ways, and has embodied them in a magnificent work, which is a most valuable addition to the literature of the subject, and reflects the highest credit to his zeal and perseverance. And though these experiments have not yet led to *the* object for which they were undertaken, namely, the discovery of an antidote, they have nevertheless led to certain conclusions, negative and positive, which are very valuable in themselves. Varied, however, as Dr. Fayrer's experiments were, we are not to conclude that more varied experiments are not needed. The fact is, we can scarcely be said to be even at the very threshold of the subject. Science ought not to be satisfied, scientific men ought not to rest, till an antidote or antidotes have been discovered. We cannot believe Nature to be so blundering as not to have an antidote in store for the bane she he has created. On the contrary the antidote may not unlikely be something very common, so as to be within reach of the meanest and poorest of our race.

At the close of his Presidential address at the British Homœopathic Congress held at Leamington, September 1873, Dr. Sharp ventured the following opinion :—"This (the contrary actions of different doses) suggests the idea that for virulent poisons—such as *snake venom, arsenic, opium,* &c., for which no antidotes are yet known, the best antidote *may be* very small doses of itself. The only opportunity I have yet had of putting this thought (an hypothesis in the useful sense) to a practical test is in respect to mercury. In a case of poisoning by this metal the third trituration of itself (the millionth part of a grain) was manifestly beneficial." In May last we received a communication from this excellent medical philosopher requesting us to test the hypothesis by experiments with snake-poison, suggesting they might be begun with the third dilution, given internally after a bite. With characteristic humanity he added : "I do not think that experiments with animals are justifiable or useful as a rule, but perhaps this subject is an exception." We heartily concur with this expression of opinion on the now much disputed question of the advisability and justifiability of experiments with lower animals so as to entail suffering or loss of life or both. We think it is nothing but impatience, a mistaken idea of progress, a vain desire to advance knowledge, which spur us to do many things which we ought not to do. Experiments on living animals, however carefully conducted and performed with the aid of anæsthetics, cannot but inflict pain and shorten the duration of their lives. Such experiments should, therefore, never be wantonly resorted to. They are only justifiable when the object is not the mere advance of knowledge, but of such knowledge as will lead to the alleviation of suffering much greater than we inflict, and the saving of many more and much more important lives than we destroy. In their performance we should observe the strictest economy as regards suffering and loss of life. It is true that in scientific investigations we cannot too often repeat our experiments, but we must remember that the experiments in question are such as inevitably lead not only to infliction of suffering upon innocent creatures, but in the majority of instances to the ultimate destruction of their lives. Such experiments, therefore, should, on no account whatever, be unnecessarily repeated. When conducting such experiments we cannot too attentively watch their progress, we cannot too narrowly and minutely observe every phenomenon as it developes itself. Such a procedure, at the same time that it is humane, makes us more observant than we would otherwise be.

The following experiments, undertaken for the purpose of testing Dr. Sharp's hypothesis, were too few in number to warrant its final disposal. Sickness has hitherto prevented us from pursuing the subject further. With restored health we hope to be able to resume the investigation. In the mean time, instead allowing the experiments to remain idle in our note-book, we publish them in the *Journal* in order that they might be suggestive of fresh research to other labourers in the field. The phenomena of poisoning were very carefully observed, and it is trusted the record here given of them will throw some light on the pathogenetic action on the cobra poison. From lack of sufficient provings the poison has not yet had its true place assigned to it in the Materia Medica. And though we are convinced nothing short of provings in the healthy human subject ought to justify our introducing any new agent as a remedial agent, yet we believe that as it is impossible to carry provings in human subjects to the verge of actual poisoning, the physiological phenomena of poisoning in animals are not only not without their use, but are of the utmost importance, and should be availed of whenever opportunity presents itself.

Our readers will remember that in our last experiment (No. 9) of the *first series* we observed the singular phenomenon in a non-venomous snake (dead from cobra-bite) of the heart beating seven minutes after apparent death, that is after the total cessation of the respiration. In this particular instance, at least, death was brought about by the stoppage of the respiratory function, and we at the time suggested the inquiry, if this was the case in all the orders of animals, or if it was the case only in reptiles. In one of the following experiments (4th) we opened the thorax five minutes after death, and we found the heart *not* beating, so that it is difficult to say whether the respiratory and the circulatory functions had ceased simultaneously, or whether the heart had continued to beat after the last respiratory act, but had ceased immediately before opening the chest. Whether the one or the other, it appears very probable from all the following experiments that the poison exerts a marked influence upon the respiration, as evidenced by the fact of its being at first considerably increased in number and then almost suddenly becoming slower till it ceases altogether. All doubt seems to have been removed by some of the experiments of Dr. Fayrer and all the experiments instituted by Dr. Lauder Brunton with the hypodermic inoculation of the actual cobra poison or of its alcholic extract,—in all which experiments the thorax was opened immediately after apparent death or after cessation of the respiration and the heart was found to pulsate, in some cases feebly, in others vigorously. We, of course, do not maintain that the cobra or other snake poison has no influence upon the heart or the circulatory function. We only want to draw attention to the fact that the respiratory function suffers earlier than the circulatory, and that death is the result rather of failure of the former than of the latter function. Whether the respiration suffers directly from moleular changes primarily effected in the blood, or indirectly through its governing nervous centre, and in the latter case whether the nervous centre itself suffers directly from the poison or indirectly from changes in the blood affecting its nutrition, it is impossible to say without more and varied experiments. The following observations on the changes induced in the constitution of the blood render it probable that the respiration or its controlling nervous centre may suffer indirectly rather than directly.

Another fact that was noticed in one of the experiments of the first series was the coagulated form in which the blood was found in the vessels generally and in the chambers of the heart after death. In two out of the three instances in which *post mortem* examinations were made in the following series the same condition of the blood was observed. In the one in which actual coagulation was not observed, it was noticed that the blood though not actually congulated, was thicker than normal, and seemed on the point of coagulating, or as if it had begun to coagulate. And if we remember that the autopsy was performed in this case only five minutes after death, it is not improbable that the blood, in a little longer time, would have entirely coagulated. It would be important in future experiments not only to determine at what time the actual coagulation takes place, but also to ascertain the precise action of the cobra poison on the blood, with especial reference to its property of coagulability. In the case of the cobra, Dr. Fayrer is inclined to think that the coagulability of the blood is simply left intact, which he at one time thought was owing to the rapidity of death produced by cobra-bite, but which he now admits to be a peculiarity of the cobra poison.* We venture to think, though of course we have not as yet sufficient data to substantiate the opinion, that in contrast with the poison of the viperine snakes which, according to the experiments of Dr. Fayrer, permanently destroys the coagulability of the blood, the poison of the colubrine snakes, at least of the cobra, destroys the fluidity of the blood, or encourages its coagulability. When we speak of coagulability, we must confess we are obliged to use the word rather vaguely, in an undefined sense, in the sense merely of simple opposition to fluidity, without understanding it to mean normal coagulability. The fact of the matter is, it has to be determined whether the clots, ante-and post-mortem, found in cobra poisoning, are normal coagula, that is, coagula formed by the normal coagulation of the fibrin, or are the result of some abnormal changes in the blood, other than, or in addition to, the coagulation of the fibrin.

We can easily understand how death must result from either of the conditions of blood noticed above as occurring in snake poisoning. The fluidity of the blood *within* the vessels is as important to life as its coagulability *outside* the vessels. We do not say, in fact, at this stage of the inquiry it would be premature to say, that the cause of death from snake poison is either the one or the other action upon the blood. All that we insist upon is that in future experiments this hypothesis may well be kept in view, to be either confirmed or rejected. Dr. Fayrer rejects the theory of blood poisoning as the cause of death in snake bites on the ground of the rapidity of death. Death can only be accounted for, according to him, on the supposition of the rapid exhaustion of the nerve centres, which can only be induced by the direct effects of the poison on them, and not through any changes in the blood. But why not? Why may not the blood be as rapidly poisoned,—its constitution so profoundly altered as at once to render it unfit for the support of the life of the tissues,—as the nerve centres may be supposed to be exhausted by the poison when conveyed by the blood direct to them? We have positive proof of the blood changes, as they do take place and are palpable, whereas we have no proof as yet of the direct and primary exhaustion of the nerve centres except from symptoms and rapidity of death, which for aught we know might not improbably arise from the despised blood changes. Why should we suppose that blood changes can only take place by a slow process and only because of the implication of the nerve centres? Why may not the changes that we observe have begun from the moment of the entry of the poison into the circulating current?

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* According to Dr. Woodford, Professor of Medical Jurisprudence, Calcutta Medical College, Police Surgeon Calcutta, and Principal of the Campbell Medical School, the blood, in all cases of poisoning from snake bite generally, remains fluid after death. We, equally with Dr. Fayrer, cannot reconcile this view of Dr. Woodford with our experiments on the lower animals. There do not seem to be any *a priori* grounds for difference in this respect between the blood of the inferior animals and that of man. Further examination, as Dr. Fayrer very rightly says, is certainly needed. In the mean time we would venture to suggest, *First*, that in cases of snake bite reported by the Police it is possible that the particular kind of snake which caused the deaths might not be accurately traced; the snakes are not generally seen; in such cases the charge is often laid at the door of the Cobra, being the most venomous in our country. *Secondly*, that in cases of death from *cobra*-bite, there is indeed coagulated blood in the vessels and in the chambers of the heart, but there is as well fluid blood, or rather a fluid portion either holding dissolved hæmatoglobulin from the disintegration of the red globules, or holding suspended a quantity of the red globules which had not become entangled in the coagula; so that unless minutely searched for in the interior of the vessels and chambers of the heart, the coagula might escape observation, the fluid portion which easily escapes from the incised vessels and heart, attracting attention to the exclusion of the solid coagula which remain inside.

The determination of the precise action of the cobra and snake poisons generally upon the blood and upon the blood-purifying and blood-circulating functions is important inasmuch as, in the absence of the discovery of a specific antidote or antidotes, it may suggest rational measures in the treatment of snake-bites or other modes of poisoning by the snake poison. For instance, if it be true, as we suggest, that the respiration (not the mere movements, but the ultimate process itself in the blood) suffers earlier than the circulation, and that death results from its failure, that is from want of depuration of the blood, then the obvious remedy that suggests itself is not the mere maintenance of artificial respiration, which is but a most imperfect way of oxygenation of the blood, but direct oxygenation by inhalations of pure oxygen itself. Again, if it be true that by one class of snake poisons the coagulability of the blood is destroyed, and by another its coagulability is abnormally increased, then the obvious treatment would be to use agents which are calculated to counteract the one condition or the other according to the nature of the case itself. We need hardly remind our readers that our knowledge of vital chemistry is not yet sufficiently advanced to suggest remedies of either description. But the fact of there being different kinds of snake poisons endowed with such different and opposite powers as to exert such opposite influence upon the constitution of the blood ought to encourage us to make researches in the same direction, in order to see if it is not possible to discover substances natural or artificial which may possess similar properties and may therefore be used in opposition to them.

Supposing we succeed in discovering substances endowed with properties similar to those of the cobra and the daboia, on what principle are we to use them as antidotes ? On the principle of contraries or of similars ? In accordance with the former principle the cobra and the daboia would seem to be antidotes of each other, but as far as three experiments could decide, Dr. Fayrer has shown that they are not so. While therefore we should still advise further experiments to test their mutual antidotal influence we should invite experiments in accordance with the other principle. It is evident, however, from the following experiments that there does not appear to be much chance of success from the use of the poisons themselves against their own destructive effects, that is, on the isopathic principle. Still while we would not discourage experiments with other dilutions than we have used, we would rather invite research towards the discovery of other substances with similar properties.

The fact of the circulation persisting after cessation of the respiratory function should warn us against regarding the last phenomenon as equivalent to cessation of life itself. There is an ancient saying amongst us that, in animals bitten by poisonous snakes, life does not become extinct with apparent death, but that it continues latent in the organism long after the induction of that awful state, and tradition is not wanting in instances of persons reviving after they were pronounced dead. There is no improbability in such instances of recovery, and in fact recent experiments but confirm the truth of the saying under notice. In cases of snakebites, therefore, we must not give up all hope, but continue in our efforts at revivification, even after apparent death, so long as cadaveric rigidity, indicative of actual extinction of all vitality, does not supervene.

Experiments 2, 3, and 5 prove that the virulence of the poison diminishes with the reduction of the quantity. In experiment 2 the quantity of 5 drops of the 3rd decimal dilution injected hypodermically was ineffective, at least, did not apparently produce any effect, till the same quantity was injected again an hour after. In this case there can be no doubt that the second dose could not have brought about the fatal effect had it not been for the previous exhibition of the first dose. In other words the first dose must have been acting in the system without our being able to perceive it, and that the second dose intensified and accelerated the action of the first. The action of the poison is therefore cumulative. In experiment 3 the same quantity of the same dilution was injected in divided doses indeed, being injected in two limbs, not however at an interval of an hour as in expt. 2, but at one and the same time. The effect in this case was more decisive and rapid, the bird feeling the influence of the poison at once and dying in less time. This shows that while it is true that the action is to some extent cumulative, the system may also get accustomed to that action, so that if sufficient time be allowed it might shake it off altogether. From expt. 5 it appears that the 4th dil. was too weak to produce a fatal effect so far as the domestic fowl is concerned. Of course without further experiments it could not be decided if a third, and that failing, a fourth dose, could not have proved fatal.

EXPERIMENTS (*Second Series*).

Expt. 1.

May 18*th*, 1874. A middle-sized young puss was bitten on the inner aspect of the right hind-leg by a full-sized male Cobra Gokhura at 4. 59 p.m.

5. 3 p. m. Respiration appears to be more frequent.

5. 5. On being made to walk the bitten leg appeared to be somewhat lame.

5.15. The animal was kept in a rather solitary place, where she was found to sit quietly.

5.25. Moving about and looking about apparently as if not affected.

5.55. Voice heavier.

6. p. m. Less active. Cannot keep head erect. Listless. The bitten leg appeared paralyzed.

6.7. 10 drops of the 3rd dilution (dec.) of the poison of the same snake mixed with a few grains of sugar of milk and a small quantity of pure milk was administered by the mouth.

After this slight convulsive movements of the head took place. The animal could no longer keep its head erect, but kept it supported on the muzzle. Respiration became much slower, and of a gasping character. Moved its tail. Became restless, lying on this side and on that. Respiration laborious. Movements only of the left fore-leg.

6.13. General convulsions.

6.15. Pupils widely dilated. Respiration stopped.

On lifting the animal urine flowed out in pretty large quantity.

6.30. Body still continues warm and supple. Pupils more dilated.

Autopsy (19*th May*, 5½ p. m.) Rigor mortis still existed but very slight. On incising the bitten part very faint reddish discoloration was observed in the subcutaneous tissue as well as in the skin, but the punctures could not be seen, nor was there any dropsical effusion about the part. The internal saphenous vein was found gorged with blood, which, however, was not coagulated. On laying open the thoracic cavity, there was found a drachm of bloody serum in the right pleura but more in the left. Some bloody serum in pericardium. The right lung more congested than the left. The right ventricle was distended with coagulated blood. The right auricle was similarly distended. The left ventricle was firmly contracted and almost empty. The left auricle contained dark coagulated blood. The vessels of the pia mater gorged with blood. No fluid in the peritoneal cavity. The intestines, the stomach, and the liver presented marks of congestion. The kidneys were congested.

Expt. 2.

May 31*st* 1874. About 5 drops of the 3rd dil. of the same poison were injected into the right leg of a small fowl at 2.35 p. m.

3 p. m. Does not seem to be affected. Walking about and picking food.

3.25. Walking about apparently unaffected.

3.35. Again the same quantity of the same dil. was injected into each leg.

4.12. Gasping. Eyes quite shut.

4.15—4.28. Was convulsed about 5 or 6 times during this time, at the end of which the bird was dead.

Expt. 3.

May 31*st*, 3. p. m. Both the legs of another fowl were injected with about drops in each of the same dil. The bird at once became lame and was unable to walk.

3.7. Lying quietly.

3.12. Respiration 24.

3.24. Unable to keep the head erect. Kept it supported on the beak. Occasionally lifts it, but it falls down.

3.30. Keeping the head in the same position, with half-shut eyes.

4.12. Still alive, and being moved becomes slightly convulsed, otherwise not.

4.20. Died convulsed.

Expt. 4.

May 31*st*. A rather small-sized, but healthy dog was made to take about 10 drops of the 3rd dil. of Cobra poison with rice and milk at 3.13 p. m.

3.16. Was bitten on the inner aspect of the left hind leg by a Cobra (Gokhura). Immediately after uttered cries of agony. Does not take the food it was eating before the bite. Continually crying. Licking its penis.

3.18. Respiration much more frequent than before bite.

3.19. No more cries. Breathing with open mouth as usual with dogs. Quiet. Breathing only a little accelerated.

3.20. The leg is now allowed to rest on the ground, now drawn up. Not uttering cries. The leg is kept chiefly drawn up.

3.22. Catches flies as usual with dogs with ordinary briskness.

3.27. Rice and milk with about 10 drops of the 3rd dil. again presented. The animal ate the rice, and stood up with the bitten leg drawn up. No more uttering cries. Appears to be quieter. Breathing less frequent.

3.37. Attempted to vomit. Did vomit. Got upon its legs, on all fours. Continual attempt at vomiting. Restless. Laid himself down again, unable to keep the head erect.

3.39. Urine and stool. Smelling its fæces as dogs do. Gets up and lies down again. Uttering groans; moving about restless.

3.40. Mouth open. Panting. Respiration much slower. Foaming at the mouth.

3.41. Occasionally wags its tails. Pupils widely dilated. Is being convulsed.

3.42. Lying stretched on the ground.

3.43. No sign of respiration. Breathed just once more. Deep gasps. Respiration spasmodic, like *nábhisvása*.

3.45. Respiratory movements confined to neck and mouth (*kanthásvasa*). Mouth half open.

3.46. Respiration quite stopped. Tongue protruded towards left side. Dead.

3.51. *Autopsy.* The thorax was opened first. The heart was found *not* beating. The heart and the blood vessels in immediate connection with it were all distended with blood. The left ventricle was full of dark blood which everywhere was fluid, but thickish, and coagulated immediately on being exposed. The blood was quite warm. The abdominal organs presented nothing abnormal. There was no appreciable quantity of fluid either in the pleuræ, pericardium, or peritoneum.

Expt. 5.

June 7th. About 4 drops of the 4th dil. were injected into the left leg of a small sized cock at 3 p. m.

5.25. Walking about vigorously, and does not seem to be at all affected. 5 drops of the same poison again injected.

June 8th. No effect.

Expt. 6.

June 7th. The dog used in this experiment was small sized, and diseased, being much emaciated. He was made to eat at 3.5 p. m. rice and milk mixed with 15 drops of the 4th dil. of Cobra poison.

3.10. Was bitten on the right hind leg by a Gokhura. Drew up its leg immediately. Uttered cries while being bitten.

3.12. Laid himself down. Did not take the prepared rice presented to him, and of which he had eaten before bite. Attempted to walk with the bitten leg drawn up. Laid himself down again, or rather fell down. Uttering subdued cries.

3.19. Attempted to rise. Uttering subdued cries. Passed a stool, thin, and coming out in small quantities. Abdomen became swollen. Respiration slower. Continually groaning. Walking about. Passed another stool, as he was walking, first portion hard, then soft, and lastly liquid. Standing on all fours.

3.43. Groaning. Sought a sheltered place and laid himself down there.

3.26. Slight convulsions of the head. Cannot keep himself in the standing position. Respiration spasmodic. The whole body in convulsions.

3.27. Walked of his own accord in a staggering manner. Attempting to vomit. Keeps his head on muzzle.

3.30. Abdominal respiration stopped. Respiration quite spasmodic. Dying.

3.31. Pupils became dilated. Gasping. Apparently dead. Gasped again two or three times, and then there was no more sign of vitality.

3.32. A few drops of Hydrocyanic Acid, 3rd dil., were injected into the right side of thorax.

3.35. Tongue slightly protruded. Mouth slightly open.

3.36. Body continues warm.

3.47. Body continues warm still, and supple.

5.34. Body cold, and in a state of cadaverous rigidity.

Expt. 7.

June 7th. A full sized, healthy dog was bitten on one of the hind legs. at 4.9. p. m. Made water as he was being bitten. Drew up its leg. Respiration became much more frequent.

4.12. 3 drachms of the 5th dil. of Cobra poison was attempted to be given by the mouth. A large quantity came away, but a small quantity must have got into the stomach.

4.14. Standing on all fours, but apparently gently on the bitten leg.

4.16. Laid himself down, rubbing its bitten leg against the ground.

4.19. Made to swallow more than a drachm of the same dilution.

4.29. Sat down, keeping the bitten leg drawn up. Groaning. Stood on all fours and groaned.

4.34. Eating grass, which dogs and cats generally do when they feel unwell.

5.2. Ropy saliva hanging out of the mouth. Laid himself down, uttering subdued groans. Eyes redder than natural. Respiration appears to be somewhat laborious.

5.23. Low moaning. Utter prostration.

5.29. Groaning. Lying with stretched legs. Groaning continually.

Got up again.

5.32. 3 drachms of the same dilution attempted to be poured down the throat. Nearly the whole quantity came away. The animal evidently could not swallow. Made water.

5.35. Convulsive movements about the ear.

5.36. Respiration slower.

5.37. Got up and fell down ; attempts to get up again. Urine dribbling out, no doubt involuntarily.

5.38. Licks the penis.

5.40. Pupils dilated. Still recognizes his master and wags his tail.

5.42. Ammonia 1 dr. in an ounce of water poured down the throat.

5.45. Another dose. The ammonia seems to be very irritating to the animal.

5.47. Breathing very slow. Convulsive movements occasionally of the head.

5.53. Knows his master and wags his tail and attempts to get up on being called.

5.54. Convulsions. Deep groans. Tongue protruded on right side. Spasmodic movements of the lower jaw.

5.57. Gasping. Convulsive movements of the whole body. Still recognizes his master.

6. p.m. Wags his tail but very feebly.

6.4, .On touching the conjunctiva with a piece of straw the eyelids attempted to close, but did so only partially, and the eyeball moved about.

6.5. The respiratory movements have stopped.

6.8. Faint movements still perceptible.

6.11. The eyeballs insensible to prickings.

Autopsy (*June 8th*, 7 a. m.) The vessels of the pia mater, covering the cerebrum, cerebellum, medulla oblongata, rather congested. Blood in these vessels *fluid*. Floor of 4th ventricle did not present to the naked eye any abnormal appearance. In fact none of the ventricles did. The choroid plexus was found deeply congested. The white substance of the brain did not present anything abnormal to the naked eye. Lungs slightly congested. No fluid in the pleural cavities. The ascending vena cava was gorged with dark coagulated blood, as also with fluid, frothy blood. On cutting through the throacic aorta near its termination small dark clots came away. There was no fluid blood in it. The veins of the bitten limb were all gorged with dark, coagulated blood. The external jugular vein contained both dark coagulated, and dark fluid blood. The common carotids contained dark coagulated, and dark fluid blood. The jugular veins contained both dark coagulated and dark fluid blood. About 4 drachms of fluid in the pericardium. Dark coagulated blood was also found in the aorta, pulmonary veins and arteries and in the chambers of the heart. The right chambers were greatly distended with the same. The kidneys were congested, the vessels contained both congulated and fluid dark blood. Bladder contracted. The liver congested, containing coagulated blood. Gall bladder distended with fluid bile.

THE BRITISH HOMŒOPATHIC CONGRESS OF 1874.

This was the 5th *revived* congress, and the 12th since the beginning. It was held in London at the London Homœopathic Hospital in Great Ormond Street on the 4th of June, Dr. R. E. Dudgeon, President in the chair. The congress was opened by the Address of the President "On the Influence of Homœopathy upon General Medicine since the death of Hahnemann." Then followed the following papers:—"On the Action of Nitric Acid in certain Forms of Cough" by Dr. Dyce Brown; "On the Action, Selection and Administration of Drugs" by Dr. R. D. Hale; "On Malignant Growths" by Dr. Edward Blake; "On the Physiological and Therapeutic Action of Aloes" by Dr. W. B. Scott; "On the State of Homœopathy in Brazil" by Dr. Camara of Rio de Janeiro; and on "Homœopathy in the Treatment of Malarious Fevers" by Dr. Mahendra Lal Sircar of Calcutta. "The time allotted for the business of the meeting did not allow of more than three of these papers being read," namely, the three first in the order we have mentioned them. The remaining three papers "were taken as read and ordered to be published in the *Transactions*." In point of fact, two only have been so printed, Dr. Scott's and Dr. Sircar's. Why Dr. Camara's has been omitted we cannot guess, unless it be that it was in the language of its author and not in English. Even in that case it should have been rendered into English and made to appear in the Transactions.

From the enumeration that we have given of the titles of the Papers that were submitted to this congress, our readers must have noted one grand peculiarity which distinguishes it from all previous congresses, namely, the fact of its having received contributions from such distant and foreign countries, as Brazil and India. In our notice of the congress of 1873 we had expressed the hope that the British Homœopathic Congress and the British Homœopathic Society should be of a more representative character than they were, that they should invite contributions and elect members from all parts of the world,—wherever, in fact, homœopathy had its professional votaries, and the English language was spoken. Whether from the hint that we thus threw out, or from the irradiating impulse of truth, the executive of the British Homœopathic Congress have appreciated the wisdom of acting in co-operation with, and of offering the right hand of fellow-ship to, every fellow-worker of whatever country or nationality. We wish the British Homœopathic Society will lose no time in doing the same. "Of one blood hath God made all the nations of men," said St. Paul of old. Modern Science, if true to her mission, which she can only be if true to herself, should, in view of the recent revelations of the correlation of the forces and the affinities in the races of organized beings that people our globe, and of the operations of the same laws that obtain here in other worlds and other systems,—modern science, we say, should be able, in the light of these marvellous disclosures, to enunciate a yet wider truth than even St. Paul was privileged to do. She should recognize a higher consanguinity than that of blood, the consanguinity, if we may so say, of similar endowments; and spurn with disdain all the petty distinctions of race and nationality.

To return: The Congress just over was a decided success. It was more numerously attended than any previous congress. We have the authority of the *Monthly Homœopathic Review* to say that "considerably more than double the number of medical men present at Leamington (1873) met at the Hospital on the 4th ultimo." The Presidential address was one of the ablest that was ever delivered. It was, we learn from the same source, "listened to with the deepest attention and the warmest interest by all who heard it." And no wonder, for whoever has read it, and every one, professional or non-professional, allopath, or homœopath, ought to read it, can bear testimony to the "wit and wisdom," "pungency and power" with which it is full to overflowing. No one can regret more than we do the necessity that still exists for polemics in medicine, especially when such an intellect as that of a Dudgeon has to be engaged in party warfare, but when the necessity does exist, it is well that such intellects should not think it beneath their dignity to engage in such strifes.

The subject of the address was the fittest that could be selected in the present day, when the Old School has entered on quite a new phase of its existence, a phase which is indicative of serious disorganization in the morale of that branch of the profession. What can be more unblushingly immoral than to steal one's property and abuse him at the same time? And yet this is what our brethren of Orthodoxy are doing. While they do not hesitate to appropriate our most precious drugs and palm them off as their own, they do not hesitate to heap abuse upon abuse over our devoted heads. In this respect the contrast is great between the New and the Old Worlds. "The Ringers, Harleys, Wilkses, Thorowgoods and Burnesses of America," said Dr. Dudgeon, "fill chairs in the *homœopathic* colleges; here they stick to the old craft and are rewarded by professorships and the applause of orthodox journalists," nay, strange enough, we should add, continue to be rewarded with the confidence of their patients. We do not wonder at the fact of professorships which are in the hands of an interested faculty and of the applause of orthodox journalists being the reward of men of the stamp and character mentioned above. But we can hardly understand how sensible men can continue to confide in their physicians when they detect them again and again in the dishonorable act of surreptitiously using the remedial agents of the very system which they lose no opportunity to vilify and the professors of which they call the hardest names such as quacks and impostors. Yet such is the fact, and this is what appears to us to be passing strange. And it is this which, as Dr. Dudgeon very rightly thinks, satisfactorily accounts for the apparent paucity of recent conversions to homœopathy in England and other countries of Europe, and even for the fact of there being renegades from our ranks.

Sir John Forbes, perplexed at the conflicting opinions and rampant scepticism prevalent in the ranks of the profession, said, "things have arrived at such a pitch that they cannot be worse. They must mend or end." What would he have said if he had lived to see the present phase of the old school which "still reviles us, while adopting our methods and remedies; still asserts her exclusive possession of the truth in medicine, while abandoning one by one all her traditional beliefs and practices;" and which still refuses to "yield an inch of her territory or a stone of her fortresses, while the advancing conqueror has already beaten her out of all her strong places, stormed her Strasburg of bleeding, overwhelmed her with confusion at her Sedan of salivation, battered down her Metz—or as the French pronounce it her *Mess*—of blisters, cauteries and emetics, and now closely invests her in her last fastness, which is already distracted by intestine dissensions, and whose much vaunted citadel, the Mont Valerien of rationality, last hope of orthodoxy, has just been basely given up by the traitor Moxon ?" We are almost sure, he would have become more perplexed and disgusted, and exclaimed with greater emphasis—"Such a state of things will neither mend nor end." But do we really give up all hope of such a deplorable state of things either mending or ending? That were to believe in the final ascendancy of evil over good. The mending and the ending will come, but from without, not from within. The profession will not have the good sense to inaugurate it, but the good sense of the community will force it upon the profession.

The papers that followed the delivery of the Presidential address were all, with one exception, of a practical character. Dr. Dyce Brown has rendered an eminent service to his homœopathic *confrères* by "bringing into prominent notice a medicine, which, though long known, is little used, and especially in developing its value in certain forms of disease, in which, to judge by the rarity of its prescription and notice in our journals, it is almost unknown." There is as much credit and honor in restoring an old and neglected medicine to its just position, as in discovering new ones. And as our readers will be glad to see from our

Gleanings that Dr. Dyce Brown has recently had the credit and honor of bringing to light two new remedies, or rather of turning to homœopathic account two drugs of which the physiological actions were furnished by allopathic authorities. Dr. Dyce Brown has the singular merit of requisitioning his extensive scholarship in the literature of both allopathic and homœopathic materia medica into the service of practical therapeutics. The case of Nitric Acid as handled by Dr. Dyce Brown shows that the Hahnemannic Materia Medica is a rich mine and that by digging deep and searchingly we may succeed in discovering other aspects and therefore other uses of old drugs than routine or a superficial observation gives us.

The value of Nitric Acid, as Dr. D. Brown shows, is in the non-tubercular, or pneumonic phthisis, and not in the genuine tubercular variety. And even in these cases when they "show active disease going on, as evidenced by rapid pulse and high temperature, nitric acid is not indicated." "But when we have subdued the acute stage by other treatment, and the patient has a nearly normal temperature, but when on examination the physical signs of phthisis are present, with a state of general weakness, loss of flesh, nocturnal perspirations, bad appetite, and sluggish bowels, with a troublesome cough and a good deal of muco-purulent expectoration, both cough and expectoration being worst in the morning and on lying down at night, then nitric acid comes in with gratifying results." Dr. D. Brown lays special stress upon the sluggish state of the bowels, and in fact he has "no hesitation in placing it in the foremost rank in our medicines for constipation." This is what we should expect from its pathogenesis, and he wonders that Hahnemann should have deemed it "more suitable for those chronic patients who are disposed to *looseness*."

Dr. Blake's paper on "Malignant Growths" is a very practical one too, giving a *resumé* of all the knowledge on the subject and briefly describing the treatment that has succeeded best in his hands. He does not believe cancer to be a blood-disease "in the sense of residing in the blood." He holds a middle opinion between the views of localists and of generalists. "Cancer is, in its own nature, as regards the primary growth, emphatically local," but there is nothing to demonstrate that it "may not be constitutional." A cancerous ancestry makes it constitutional. We are sorry to be obliged to differ from the author when believing that "the employment of the trocar or of the aspirator certainly tends to expedite the ulceration of the cancer, and thus has a material effect in shortening life," and admitting our duty as physicians "is to prolong existence under all circumstances, even when that existence is fraught with acute suffering," he justifies such violent means of diagnosis. In the matter of treatment Dr. Blake has found in the Scirrhus variety *cónium* useful in the early stage, *hydrastis* in the second stage of degenerative softening, and the external use of *galium aperine* in the third or ulcerative stage; in the Encephaloid variety *carbo animalis* and *thuja*; in Epithelioma *hydrastis* and it failing *arsenic;* in cancroid growths, of which the representative is lupus, *bichromate of potash.* He condemns the use of the knife, and advocates the enucleation of the tumors by caustics such as the chloride of zinc, aided by the ecraseur.

Dr. Scott's is a useful paper "On the physiological and Therapeutic Action of Aloes," in which he touches on the history of the drug, its concordances with other drugs, its organopathy as he calls it, and concludes with observations on its use in hæmorrhoids, menorrhagia, dysentery, diarrhœa and dyspepsia. The organopathy is comprised in the following spheres of action of the drug—"1. Mucous membranes generally, and in particular, those of the pelvic viscera. 2. Involuntary muscles, especially those of the pelvic and cranial vessels."

The theoretical paper of Dr. Hale "On the Action, Selection and Administration of drugs" is a highly interesting one, and deserves an attentive perusal. We unreservedly go with the author when he looks upon the *similia similibus curantur* law as but an empirical formula and not the ultimatum of therapeutical science. We believe with him that there is a higher law which will absorb all the minor laws, as did Newton's gravitation the laws of Kepler. The author is very justly apprehensive that "the hindrances to the advance and recognition of our mode of practice are now more likely to exist within our ranks, either by our older members stagnating into mechanical routine, or by our younger practitioners not only undervaluing the experience of Hahnemann's earlier disciples, but also in neglecting the individualisation of cases, the patient study of the materia medica, and the administration of those doses which the experience of the last fifty or sixty years has proved to be the best." Both these extremes should be avoided, and chiefly the "stagnation into old routine." We must not ignore "the labors of other explorers of another school, who although alas! not of us, are working out problems of incalculable value for us, and may ere long be one with us, in recognising the existence of that higher law which only requires time and patient working to bring to light." Let us look sharp that we do not miss this law, which, judging from the signs in the medical horizon, is on the eve of discovery. For if it be the good fortune of the old school, and not ours, to discover this law, our positions will be reversed, and we may in our turn opppose it, just as they have hitherto been doing the provisional law of Hahnemann.

REVIEW.

Padartha Bijnana. Part I. (Being a Course of Lectures on the Elements of Physics delivered during the session of 1872-73). By Kanny Loll Dey, Rai Bahadur, Asst Surjeon, Fellow of the Calcutta University; Teacher of Chemistry and Medical Jurisprudence at the Campbell Medical School; Honorary Member of the Pharmaceutical Society of Great Britain and Ireland &c. &c. &c.

পদার্থ বিজ্ঞান। প্রথম ভাগ। শ্রীকানাইলাল দে রায় বাহাদুর প্রনীত। Printed at the New Indian Press. Calcutta, 1874.

Elements of Physics in Bengali. By Mahendra Nath Bhattacharjya, M.A· New (3rd) Edition. Revised and Enlarged.

পদার্থ দর্শন। কলিকাতা নর্ম্মাল বিদ্যালয়স্থ পদার্থ বিদ্যাধ্যাপক শ্রীমহেন্দ্র নাথ ভট্টাচার্য্য এম, এ, প্রনীত। নুতন সংস্করণ। পরিবর্ত্তিত ও পরিবর্দ্ধিত। কলিকাতা হিতৈষী যন্ত্রে মুদ্রিত। সংবৎ ১৯৩০।

প্রাকৃতিক বিজ্ঞান। প্রথম ও দ্বিতীয় ভাগ। জড়ের গুন, গতির নিয়ম, ভার-মধ্য, যন্ত্র বিজ্ঞান, বাষ্পীয় যন্ত্র। শ্রীভূদেব মুখোপাধ্যায় কর্তৃক প্রনীত। হুগলী। খৃঃ ১৮৬৬॥

Elements of Natural Philosophy in Bengali.. Matter and Motion. By Ukkhoy Coomar Dutt. Fourteenth Edition.

পদার্থ বিদ্যা। জড়ের গুন ও গতির নিয়ম। শ্রীঅক্ষয় কুমার দত্ত প্রনীত। New Sanskrit Press. Calcutta. 1874.

We have given the titles of nearly all the books published in Bengal on Natural Philosophy since the introduction of western learning into this country. It is half a century since the establishment of the first College (the Hindu) where Natural Philosophy was first taught, and it is forty years since the establishment of the College (the Calcutta Medical) where that subject forms an essential preliminary to the subjects which constitute the fundamental subjects of instruction. A sad commentary this on the amount of intellectual activity called forth by the machinery of education in vogue. The fact loudly calls for a review of the cause or causes which have stood in the way of improvement and progress notwithstanding the apparently vast and expensive efforts of an enlightened Government to elevate the intellectual condition of the people.

We cannot stop here to enter into a lengthened discussion of the subject. We would only observe in passing that the cause in our opinion may be summed up under the heads of want of adequate encouragement on the part of Government, and want of the virtue of self-reliance on the part of the natives of the country. In no subject can we expect improvement unless the persons from whom improvement is expected are provided with the necessary means whereby improvement is possible. The necessary means come under the heads of pecuniary and official. It requires no argument to prove that everywhere money is the first requisite to carry on any undertaking, and in the matter of scientific undertakings, it is pre-eminently so in our country where the whole atmosphere is unscientific, where you cannot get the commonest scientific implements and apparatus and materials without indenting from foreign countries, that is to say, without paying heavily for such things in money and in time.

The advantage of official position is easily understood. It means the advantage of money to a large extent, for a man in a high official position can command many things, which one not in such position can either command only by a large expenditure of money or not command at all. Besides, official position confers this additional and most important advantage, namely, that it throws the individual holding it upon his own resources, which compels him to exercise his faculties in all manner of ways so as to attain his ends. But official positions in order to be able to confer this advantage, must be more than of a merely subordinate character, must be to a large extent independent and responsible, so that the individuals holding them may breathe the air of freedom necessary to the play of the faculties. Notwithstanding the inestimable blessings we enjoy under British rule, we must record it as the fruit of the short-sighted policy of our rulers that in strange contrast with their otherwise enlightened and liberal character, we are not allowed, unless very exceptionally, to hold positions of the character we have been speaking of.

We not only regret the want of adequate encouragement to the proper cultivation of physical science by the natives of this country on the part of Government, but we deprecate most strongly the apathy of our own community in that respect. If we reflect upon the amount of available wealth in the country, a large portion of which is buried in coffers and underground never to come to any use whatever, and the remainder of which is wasted in the mere sensual gratification of its possessors, to sink them more and more in the depths of intellectual and moral degradation, and if we but think for a moment to what grand and elevating uses such wealth might be turned, what can we do but sigh and weep at the condition of our unfortunate country? If our countrymen had but understood that the best way to protect and improve wealth was not to keep it enclosed in iron or wooden or brick walls, but to allow it to circulate to purchase the real comforts of life, improve the intellect, and elevate the morals, then our country under the fostering care of our present rulers would have worn an aspect quite different from what it now does. Every nook and corner of it would have teemed with schools and colleges developing intelligence in the meanest and poorest of our race, every nook and corner of it would have been compelled to yield up their treasures to the exacting and extorting intelligence of man, every nook and corner of it would have resounded with the clank and hum of machinery erected to convert the raw materials into all possible forms for our use. Instead of which we have yet to depend for every new undertaking upon Government, and for the commonest articles of daily consumption and use upon foreign countries or on the mercy of the elements.

The causes of the want of adequate improvement in knowledge are indeed thus known, but it is not easy to remove them. It is not easy to persuade Government to trust us with important and responsible posts, and less easy by far to persuade our millionaires to look to the interests of their country. Under these circumstances we must await the work of time. We must endeavour to instil into the minds of the masses the principles of the sciences, in order that gradually a craving may be created for more and more knowledge, which by virtue of the law of our nature will lead to the development of knowledge. For the attainment of this object, the most laudable that can be imagined, the best and perhaps the only means that exists, is instruction through the vernacular. But how is it possible to convey scientific instruction through the vernacular, when that vernacular as a language, and especially as a language of science, is yet in its cradle? This is the great problem before our educationists, and on its solution, as far as we have been able to see, depends the future weal and welfare of the country.

We think it unnecessary to bring forward argument to show that two qualifications are essential for the satisfactory fulfilment of the object in view,—a thorough acquaintance with the science or the particular branch of it intended to be rendered into the vernacular, and as thorough an acquaintance with not only the vernacular, but with its parent language, the Sanskrit. The Sanskrit is a rich and copious language not only as respects pure literature, but no less as respects philosophy and science. When we speak of acquaintance with the Sanskrit, we mean more than a superficial acquaintance, extending beyond mere literature, and embracing the philosophies and the sciences. Scholarship such as this will enable the intending author to avoid importing foreign and necessarily barbarous and unintelligible words. Such words may with advantage be used parenthetically as has been done by Rai Kanai Lal Dey Bahadur, but they should never be introduced permanently into the language itself. Such introduction would be justifiable when no vernacular or Sanskrit equivalent could be found or coined. Judged by the standard we have thus set up, none of the works, the titles of which head this article, will bear a strict criticism. None of the authors seems to be acquainted with Sanskrit and two of them can hardly be said to possess a respectable knowledge of the subjects they have attempted to render into the vernacular. Babu Mahendra Nath Bhattacharjya appears to us to possess a more than superficial knowledge of physics, and Rai Kanai Lal Dey from a long practical acquaintance with it is expected to have, and has indeed a deep knowledge of it.

The works are of different merits, but not in proportion, as we should expect, to the actual merits of the authors. Each has merits which recommend it to particular classes of readers. The work of Babu Ukkhoy Coomar Dutt treats only of matter and motion, and as an elementary work is very good for beginners. Babu Bhudeb Mookerjee and Babu Mahendra Nath Bhattacharyya's works are both good, but the former treats chiefly of Mechanics, while the latter treats of Natural Philosophy more comprehensively. Rai Kanai Lal Dey Bahadur's work is more of the nature of Chemical Physics, than of Physics or Natural Philosophy, and as such it is an excellent introduction to this branch of the science. The subjects have been clearly and fully treated in language plain and simple. We should think the language is too simple in places, being almost colloquial and unfit in a work on science. It may be urged that the work is but a reprint of the lectures which the author had delivered to his pupils, but even that is no good ground for retaining in the published work words and expressions which one learned in the Vernacular can not but book upon as vulgarisms. It is true that the pupils, whom Rai Kanai Lal has to address, and for whom the work is intended, are as a general rule not highly educated in the vernacular, and that therefore the language has to a certain extent to be adapted to their capacities. It must be remembered, however, that it is much easier to lower than to elevate, and that while the teacher should not render his prelections unnecessarily heavy and difficult of comprehension, he should have at the same time due regard for the dignity and purity of the language in which he delivers his lectures or writes his works. With this one blemish excepted the work is an excellent thing, and no vernacular medical student should be without it. Rai Kanai Lal, however, in order to make his book more useful and serve as a complete text-book, should add a chapter on Electricity and Magnetism which subjects, we are sorry to see, have been altogether omitted. We should further advise him to add illustrations. It is impossible in the present day to treat of natural subjects without the aid of illustrations. Mere descriptions without such aid very seldom give a clear idea of the objects described. We are aware of the difficulty in procuring good illustrations, but the difficulty must be overcome.

Besides the parenthetical use of technical English terms which we have noticed above, there is another noticeable feature in the book which has much added to its usefulness, we mean the marginal contents in English which enable one at once to make out what the particular paragraph or a part of it is treating of without the trouble of having to refer to the table of contents. Perhaps this is the first attempt of the kind in Bengali printing, and is therefore on that account not without many blemishes which are only pardonable in a first attempt. We wish we could say as favorably of the getting up and typography of the book as of the book itself. But the freaks of the printer's d—l, by which it is disfigured, are so many and in some instances so serious that we should advise the author to look sharp, in future, to his printers, if he has any regard for the appearance of his books. In justification of our strictures we would refer our readers to the title-page which we have transcribed unaltered.

Acknowledgement.

Essays on Medicine: Being an Investigation of Homœopathy and other Medical Systems. By William Sharp, M. D., F. R. S., Fellow of the Royal Medical and Chirurgical Society of London, &c. &c. Formerly Senior Surgeon to the Bradford Infirmary. The Tenth Edition. Henry Turner & Co. London. 1874.

We shall review this work, perhaps the most important and philosophical that has recently issued from the Homœopathic Press, in our next.

CLINICAL RECORD.

A Case of Cholera. Recovery.

UNDER CARE OF DR. M. L. SIRCAR.

Mahesh, a boy of the weaver caste, aged 15, was admitted in my Out-Door dispensary on the morning of the 6th May, for diarrhœa, vomiting and gripes which had commenced at about 5 a. m.

According to the mother's statement, he had come to Calcutta only four days, walking all the way from Radhanagar his native village (32 miles distant from Calcutta). He had indulged much in indigestible food the day before. At the time he was brought to me his chief complaint, which made him restless beyond measure, and utter loud and most distressing cries, was griping, Neither the diarrhœa nor the vomiting was at all severe, far less alarming. The pulse was good and the body warm. I therefore at

10.30 a. m. gave *Coloc.* 6. Took two doses at intervals of 15 minutes; griping as bad as before; passed a stool watery, not very profuse, but containing some undigested food. After this had two more doses of *Coloc.*; griping no better if not worse; began to purge more, and in addition had one watery vomiting.

After this began to be collapsed, pulse sank, the body became cold. *Ars.* 6., after one dose the body became warmer, but the gripes continued.

The stool, instead of watery, became slimy, with a rosy tint. Another dose of *Ars.*; body warmer still, almost feverish; the patient became from this time very thirsty; stools scantier and slimy. *Aco.* 6, of which he took 2 doses; stools became bilious but were still mucous and bloody, and the pains in the abdomen as bad as before. *Merc. c.* 6, one dose. After this he again passed a copious watery stool and became collapsed; thirst so violent that he loudly called for water, ran to the street-pipe and drank water out of the hydrant. On being restrained he ran away from the house and drank water from a distant hydrant; was brought back by the mother in a state of perfect collapse.

5.30 p. m. Pulse hardly perceptible, eyes sunk and without lustre; complains of severe pain in the stomach; rolling on the floor and screaming in agony. *Ars.* 12, every ½ hour.

7 p. m. Pulse very small and thrilling; other symptoms continue unabated; passed one scanty stool consisting of mucus and water.

9 p. m. Pulse a little better; pain, which is at times burning, con-

tinues; empty eructations; cold all over, especially at the extremities. *Carb. v.* 30.

10.30 p. m. Pulse improving. No amelioration of either the pain, or the restlessness, or thirst, but cannot drink largely at a time. *Ars.* 12 and *Carbo v.* 30, alternately at intervals of 2 hours.

2 a. m. Cold still, the region of the heart only appears a little warm; more quiet, but on being asked, he says the pain has not abated; eyes injected, had more scanty stools, the last watery of a yellowish colour; no urine; no more medicine.

May 7th, 6 a. m. Pulse quick and small, but countable; eyes dull and injected; spasmodic pain in the stomach continues; empty eructations now and then; reaction very imperfect. *Cuprum* 30. no urine.

9.15 a. m. After taking a little sugar-candy and water, he vomited a large quantity of bitter watery fluid of a greenish colour.

4 p. m. Pulse much better; no urine; eyes dull and injected; speaking incoherently now and then; body warmer, extremities still cold. *Bell.* 30.

10 p. m. Delirium much less, eyes red; pain in the stomach decidedly less. Repeat *Bell.* 30.

2 a. m. Conjunctivæ less injected, no more stools, no urine; retching now and then with scanty vomiting; appears perfectly in his senses; extremities warmer. Stop medicine.

May 8th, 6 a. m. No more pain in the stomach; no stool, no urine, no delirium; pulse regular but accelerated; eyes more healthy-looking. Ordered to have a little sago-water.

7 a. m. Could not take sago, as it produces vomiting; complains of slight pain again. *Bell.* 30 another dose. Half an hour after this, he experienced relief and passed a few drops of a very high coloured urine.

11 a. m. Passed urine about ½ a poah. Cannot take any beverage, although he feels very thirsty, complains of burning in the stomach again.

1 p. m. The mother stated that the patient was not able to retain water which he throws up immediately after drinking. *Eupat* 6.

6 p. m. The mother's statement appeared wrong on further examination. The patient could retain water but would vomit only sago, which he says had a peculiar nauseating taste, although prepared with care. Feels very languid after vomiting. No med.

10 p. m. Retching and vomiting continuing; no more stool. There was this singularity in this case, that the vomiting and retching alternated with the purging. *Tart. Emet.* 90.

May 9th, 6 a. m. Passed a rather peaceful night; vomiting much less;

no retching; sago or arrow-root still causes vomiting. Allowed (চিড়ার কাত). From this time forward, he continued to improve, without any untoward symptom being complained of, and on the 12*th May* he took his usual meal with good appetite.

Remarks.

This was one of the most dreadful cases of cholera we have ever had, but of which the gravity it is impossible in words to impress upon the reader. Commencing as simple indigestion from indulgence in indigestible food, it rapidly passed on to cholera of such formidable character that we had no hope of the patient for some time. The almost perverse obstinacy of the patient was very annoying and was a serious bar to his treatment, but much of that perverseness was due to the intolerable griping from which he suffered, and which we failed to relieve till the next day when *Cuprum* removed it altogether. We had not prescribed this drug at first as there were no cramps of the extremities, and we were at last driven to it under the idea that the gripes might after all be nothing but spasms of the intestinal muscular fibres. The relief that followed the exhibition of the drug confirmed the idea. It is more than we can say if *Cuprum* would have cut short the disease if exhibited in the beginning. The case illustrated the efficacy of *Bell.* in cases where along with suppression of the urine there is affection of the brain, or more properly where there is congestion both of the kidneys and of the brain. The case further illustrated the utility of *Tart. Emet.* when the vomiting alternates with the purging, ceasing when the purging appears, and reappearing when the latter ceases.

A Case of Hæmorrhagic Dysentery. Recovery.

UNDER CARE OF RAM MOY ROY, L. M. S.

A Mahometan, named Golam Hosain Khan, aged 39, resident of Mirzapur, came to me on the 4th June for treatment. He stated that he had been suffering from dysentery since October 1873, and was under treatment of a European Surgeon of note for 5 weeks. Not deriving any benefit therefrom he had placed himself under a

Kaviraj under whose treatment he was for a month with no better result. He then went to the Medical College Hospital, where he was admitted in the first Physician's ward in February. He remained here for upwards of three months, but getting worse he quitted the hospital and came to me as aforesaid. The symptoms I noticed at the time were: Fever with slight morning remissions; 15 to 20 muco-purulent stools daily, with blood; a good deal of ropy mucus with the stools, discovered on washing them; great deal of tenesmus; nausea with vomiting; no appetite; disposition very irritable; great emaciation, so that he looked almost like a skeleton.

He had at first *Ipec.* 6 three times a day, for six days. He derived immense relief, but was not cured of the disease. I therefore gave *Merc.* c. 6 for 4 days but was no better. On the 13th June I gave him *Ipec.* and *Merc. c.* in alternation. He took them for 5 days. By the 18th the fever had disappeared, he had regained his appetite, and he was free from dysenteric stools. On the 20th after taking some chicken broth without my order, he had 6 dysenteric stools. *Puls.* 6 three times for 2 days brought him round, and effected the final cure. I met him after a month and found him all right.

Remarks by the Editor.

This case illustrates the efficacy of homœopathy in cases of dysentery where not only modern allopathy but even the Kaviraj system with its much vaunted nostrums fail. The case illustrates further the utility and, therefore, the necessity of the alternation of remedies. We see also by the light of this case how a slight indiscretion in diet during convalescence is rapidy followed by a return of the symptoms of the disease, and how, therefore, it is of utmost consequence to be extremely careful in this matter.

Gleanings from Contemporary Literature.

ON SOME POINTS IN THE THERAPEUTICS OF APOMORPHIA AND CHLORAL.

By D. Dyce Brown, M.A., M.D.

(Read before the British Homœopathic Society.)

The truth of any scientific law or system is generally demonstrated by an *experimentum crucis*, and when this is possible, it cannot fail greatly to strengthen the convictions of those who believe in the law or system, and to impress those who are inclined to be sceptical. In such a science as therapeutics, where absolute proof is so difficult to be brought home to the minds of the sceptics of the old school, it adds immensely to our strength in argument when we can bring forward an *experimentum crucis*. Such has always seemed to me to be our power in accordance with the homœopathic law of predicating exactly the therapeutic sphere of a medicine before it is even tried in a single case. We have but to discover by experiment or by accidental cases of poisoning what are the physiological effects produced by any given substance, and we can at once say, and say with confidence in the result, in what cases of disease we shall find it useful. The subjects of my paper afford, I think, an excellent illustration of this point. They have nothing in common therapeutically, but I have grouped *Apomorphia* and *Chloral* together, as they are both recently discovered drugs, and I think that I am the first who has made use of these drugs homœopathically.

To begin with *Apomorphia*. When I first read the account of *Apomorphia* a long time ago it was simply stated that it was found to produce sickness and vomiting in exceedingly small doses, and that it was proposed to use it as an emetic in cases where such was required. It then struck me that, if such was the case, it ought to be a valuable medicine in sickness and vomiting. This was all the information I had. But we have now, thanks to the careful experiments of Dr. Galley Blackley, a much more full account of its physiological action. Dr. Blackley's interesting paper is published in the *British Journal of Homœopathy* for July, 1873. I shall take the liberty of giving a sketch of its action as given by Dr. Blackely, and perhaps the best way is to quote Dr. Blackley's experiment on himself. He says, "On may 25th, 1869, at 9 p.m., my general health being good and the pulse and temperature normal, in the presence of my friend Dr. Wright I injected ten minims of a 10 per cent. solution of *Apomorphine* under the skin of the left arm, the pulse and temperature at the moment of injection being 72 and 98° respectively. During the first two minutes no effects were produced.. After about ten minutes the pulse began to rise slightly and the respirations became slightly accelerated. At the end of four minutes I felt a sudden qualmishness, which was almost immediately followed by nausea and profuse vomiting. This continued for several minutes, and was followed, as soon as the contents of the stomach had been evacuated, by severe retching. On taking a draught of water with a little brandy in it this was immediately rejected, and on drinking cold water this too returned at once. No bile, however, came up in the vomited matters. At the end of seven or eight minutes from the commencement of the experiment I began to feel very faint and was compelled to lie down, and almost immediately on doing so I fainted entirely, and remained in a state of syncope for about five minutes. On awaking from this I felt giddy and chilly, and was obliged to take a little brandy and water. This was retained, and as I began to feel slightly drowsy I remained lying down for the space of about an hour, during which time I perspired profusely. On rising I still felt slight giddiness, but no inclination to vomit. I went to bed and slept soundly all night, awaking about 8 a. m. in my usual health, slightly pale, but very hungry."

Its action upon animals seems to be somewhat different from that in man, as in them a larger dose was required to produce the physiological effects. In summing up the effects produced by a physiological dose, Dr Blackley gives those of digestion as follows :—"Qualmishness, nausea, vomiting, retching, convulsive movements of the stomach, præcordial pain, salivation, and diarrhœa (in cats)." I refrain from quoting the other symptoms produced, as, in man, the stomach symptoms are *the* prominent ones, and they are the only ones to which I wish to draw attention to-night. From the experiment above quoted, in which Dr. Blackley next morning, after a good night's sleep, awoke in his usual health and feeling hungry, and also from an experiment he made on a young carman, where after a dose sufficient to cause vomiting given at 8 p.m., the man walked home about 9, and ate a hearty supper on reaching his house, I infer that *Apomorphia,* though causing severe vomiting, does not cause, as other emetics do, any profound or marked interference with *digestion,* or even pain in the stomach. This coincides with what I find to be the sphere of its action on the stomach. The cases where I have used it with success are chiefly those where sickness or vomiting constitute the disease under which the patient is labouring. We frequently come across such cases. The tongue is clean, the bowels are regular, there are no headaches, the patient has a desire more or less for food, and has no pain after eating, but a feeling of nausea comes on at intervals, especially after taking food, which may or may not be vomited. In other cases, where there is marked dyspepsia, and where *Nux* or *Pulsatilla* is indicated, I find *Apomorphia* very valuable given *at the time* of the onset of the sick feeling, and repeated every ten minutes or quarter of an hour till it is relieved. This is over and above the administration of the other medicine suited to the dyspepsia which is given at regular intervals through the day. In other cases still, when the vomiting is sympathetic, as in the case of a neuralgic headache, or a gall-stone, or a cerebral affection, or a uterine complaint, *Apomorphia* is equally useful. I observe that, in the discussion on Dr. Blackley's paper, Dr. Cooper is reported to have stated that he had seen immediate cessation of vomiting in a distressing case where a tumour pressed on the brain. The action of *Apomorphia* in sickness and vomiting seems to me very much to resemble that of *Ipecacuanha,* and it is indicated in similar cases. A very important point to be observed is that *Apomorphia* is a specific emetic and does not cause vomiting by any local irritant action. This is clearly shown by its producing emesis when injected hypodermically. As to the dose required to produce vomiting, when I first read the accounts of its effects as quoted from a German periodical, it was stated that a very much more minute quantity was sufficient than that stated by Drs. Blackley and Gee. Dr. Blackley in the experiment quoted injected subcutaneously ten minims of a ten per cent. solution, or in other words a whole grain, and in the case of the carman one twentieth of a grain was injected, while Dr. Blackley states that Dr. Gee found it necessary to give one and a half grains by the mouth to cause vomiting in a man. I have unfortunately lost the reference to the periodical in which I read the account of the experiments, but there it was stated that one five hundredth of a grain was sufficient to produce emesis. In corroboration of this point I observe in the *British Medical Journal* of

February 21st, 1874, a report of a paper by Dr. Walter G. Smith, read before the Medical Society of the College of Physicians of Ireland, on "Recent Therapeutical Remedies," in which he states that the dose hypodermically as an emetic is from .046 to .196 of a grain.

My first information regulated my choice of the therapeutic dose, which was the 3rd centesimal dilution. I have never used any other dilution, and the results I have obtained have been so gratfying that I do not see the necessity of using a lower potency. I got some of the pure drug from Macfarlan of Edinburgh, and had the 3rd cent. dilution prepared in Aberdeen in the form of tincture.'

Dr. Blackley advises the trituration to be used, as he says the tincture does not keep. This is certainly a mistake, at least when diluted to the 3rd cent. ; as it has always in my hands answered admirably, which could not have been the case if the diluted tincture decomposed.

I now proceed to give some cases where *Apomorphia* has been used with success in the various forms of disease I have named. The cases are chiefly from my dispensary note-book as kept by the students.

Case 1.—Mrs. E—, æt. 50, May 17th, 1872. Complains of sickness which she has had for last two days. Has a constant feeling of nausea, and disinclination to eat. No headache. Bowels regular. Tongue slightly whitish. ℞ *Apomorphia.* This patient afterwards returned with another complaint, having been quite cured of the sickness.

Case 2.—J. M. J—, æt. fifteen months, June 14th, 1872. Has been vomiting for last three days. Tongue whitish ; bowels slightly loose ; stools whitish ; ℞ *Apomorphia* 3, ¼ drop dose.

17th—Vomiting much better, only vomited once yesterday, and not at all to-day. Bowels open three times a day, and natural in appearance.

Case 3.—Helen M—, æt. 60, November 17th, 1873. Has been ill for past twelve months, but worse last three months. Vomits her food about an hour after taking it, and has a constant feeling of nausea. No headache ; bowels open every second day, costive ; tongue clean ; little or no pain in stomach. ℞ *Apomorphia* 3.

December 1st.—Feels much better ; vomiting entirely gone ; bowels less costive, and open once each day. Has no appetite. Ordered *Quinine.*

Case 4.—Mrs. G.—, June 4th 1872. Came complaining of frequent vomiting and almost constant nausea ; tongue clean ; catamenia regular ; has leucorrhœa. ℞ *Apomorphia* 3 and cold sitz bath.

6th.—Sickness quite gone.

Case 5.—Margaret P—, æt. 50, May 18th, 1872. Has emphysema. When seen complained of pain and tenderness over the region of the liver, which was enlarged. Pulse rather quick ; tongue whitish ; bowels regular. Cannot retain anything on the stomach, and has constant feeling of nausea ; severe headache. To have *Bryonia* 2 every three hours, and *Apomorphia* to be repeated at intervals of an hour, till sickness subsides.

27th.—Pain over liver much better. Sickness quite removed after two doses of *Apomorphia.* To-day felt twice a slight feeling of nausea, but it passed off in a few minutes.

In this case the vomiting was evidently sympathetic with the liver affection. The following two cases were kindly given me by my friend and former pupil Dr. James Walker. They are excellent examples of the power of *Apomorphia* to check sympathetic vomiting, in the one case arising from uterine and in the other from ovarian disease.

Case 6—B. L—, a young lady about twenty-three, who about some eighteen months previous to coming under homœopathic treatment, had sustained displacement of the uterus from a severe fall, and had ever since been afflicted with distressing sickness. Since the occurrence of the accident she had been growing gradually worse in spite of the allopathic treatment which had been resorted to, viz., the local application of pessaries, astringents, and caustics, and the internal administration of the drugs usually exhibited in such cases, and, being rather disheartened by such a result, had resolved to give homœopathy a trial.

The most prominent symptom at this time was an almost constant feeling of sickness, with frequent attacks of violent retching, which were followed by intense prostration. Every remedy that could be thought of as having any relation to the sickness was tried, but in vain; the only one which in the least mitigated it was *Kreosote* 3, but even that soon lost what little effect it ever had. Finally, *Apomorphia* 3 was exhibited, and at the same time a cold sitz-bath (the only local treatment she would bear of) was employed every morning. From this time the sickness began to abate, and the retching fits soon wholly disappeared, and if at any time she felt a threatening of their return, a few drops of the *Apomorphia* tincture completely checked the attack.

Case 7.—A lady æt. 42, in whom there was persistent vomiting depending on the presence of a large ovarian tumour. *Apomorphia* was successful after all other remedies had failed. She was subject to attacks of sickness whenever her general health was from any cause below par, but was usually speedily relieved by *Nux vom.* and *Petroleum.* In the present instance, however, those remedies were quite unavailling, as well as many others that were tried, and the sickness continued unabated for several days. *Apomorphia* 3 was then made trial of, and on calling next morning she stated that after the second dose of the new medicine the sickness had quite left her, and that she had not required to have further recourse to it.

Case 8.—M—, sailor, æt. 28, June 7th, 1872. For three days has had sickness and incessant vomiting; can keep no food in his stomach; inclines to be costive; tongue whitish; pain on pressure over liver, no enlargement. Had ague five years ago. *Apomorphia* every hour.

10th.—After three doses the sickness stopped and has not returned.

Case 9.—Wm. D—, æt. 5, December 11th, 1873. For last eight days has been vomiting his food just after taking it. No pain in stomach; no appetite; bowels regular; tongue clean; is slightly feverish at night. Ordered *Ipec.*

17th.—Vomiting not much better, but he keeps his food sometimes for two hours. Complains of pains all over his body, and headache. Has been taking entirely milk food. To have animal diet. *Apomorphia.*

22nd.—Vomiting much better, but not entirely gone. Continue *Apomorphia.* Did not return. From being so much improved, the probability is that, having got quite well, his mother did not think it necessary to bring him back.

Case 10.—W. D—, æt. 2, has vomited everything for the last five days. The vomiting sometimes comes on immediately after food, at other times a little after. Food comes up undigested. *Apomorphia.* This child was not brought back.

I class this case as well as the two following as successful, although the patients were not brought back. Dispensary patients invariably return at least once if not improved. I always request patients to return in a few days if not better, and I frequently verify by after inquiry the fact that such patients were cured by the first prescription.

Case 11.—Mrs. A—, æt, 32, complains of sickness in the morning, accompanied by headache and flushing of the face. This feeling comes on immediately after rising in the morning, and generally wears off after breakfast. Tongue clean; bowels regular; sickness not made worse by eating; no pain in the stomach, but sometimes a feeling of fulness after food; is nursing a child nine months old. *Apomorphia* 3 ter die. Did not return.

Case 12.—John M—, aged fourteen months, has been vomiting very frequently for fourteen days. Not only vomits after eating and drinking, but retches even with an empty stomach. Is not weaned, but will not take the breast often, and will take no food. Had formerly diarrhœa which is now stopped. Tongue clean at tip, whitish at the back ; has five teeth. *Apomorphia* 3 every three hours.

Has not been brought back.

Case 13.—Jessie W—, æt.23, April 29th, 1872. Complains of pain in the back, headache and sickness, which is worse in the morning. Vomits after taking food. There has been no appearance of the catamenia for two months. Pregnancy doubtful. *Nux vom.*

May 8th.—Sickness no better. *Apomorphia.*

11th.—Sickness gone till to-day, when there is slight return.

16th.—Feels much better, sickness only occasionally recurs. Continue medicine. She did not return again.

I have found the *Apomorphia* also successful in removing the nausea, which frequently persisted between attacks of vomiting, produced by the passage of a series of gall-stones, and in a case of long-standing periodic supra-orbital neuralgia, in connection with the liver, in a lady who had lived a number of years in India, *Apomorphia* relieves the frequent nausea much more uniformly than *Ipec.* does.

In the case of a young man whom I have at present under treatment for chronic dyspepsia, with frequent nausea and vomiting, *Nux* is indicated as the chief medicine, and under this there has been marked improvement, but I prescribed *Apomorphia* 3, to be taken when the sickness comes on, and to be repeated every quarter of an hour till it goes off. He tells me that he has found one drop taken in this way entirely remove the nausea for the time.

I think the cases I have related give a clear proof of the value of *Apomorphia* in sickness whether dyspeptic or reflex, and I feel sure that the more it is used the more will it be found a most reliable and valuable medicine in such cases.

To turn now to *Chloral.*

The only points in the therapeutics of *Chloral* to which I wish to allude to-night are its use in *urticaria* and *eye-diseases*, chiefly *conjunctivitis.* It is necessary to remind you in the first place of the physiological effects of *Chloral* as producing these affections. I collected in the *Monthly Hom. Review* for June, 1871, a series of cases in which these points are well demonstrated. As they may have fallen out of your recollection, perhaps I may be permitted to go over the chief points in the pathogenesis.

In one case "an eruption appeared upon the arms, legs and face, and subsequently over the whole body, in large blotches of different shapes, raised above the surface, and of a deep red colour. The conjunctivæ were injected, and the face had a puffed, swelled appearance, especially below the eyes. Gradually these blotches coalesced till the whole skin was in this red blotchy state, more nearly resembling measles than anything else. There was high fever, thirst, coated tongue, and loss of appetite, with intense irritation and itching of the skin, preventing sleep at night."

In another case "an eruption appeared on the arms and legs, exactly like nettle-rash, in large raised wheals, with intense irritative itching."

In a third case the patient was noticed to "be much flushed, and to present over her whole body a diffuse inflammatory redness so closely resembling the smooth eruption of scarlatina that it was thought prudent to isolate her in the hospital for contagious diseases. Here more characteristic symptoms were developed. A number of long pale elevations, or wheals, showed themselves on the legs, shoulders, and waist, while similar ones could be produced on other parts of the skin by scratching. At the same time burning stinging sensations, and a feeling of tightness and hardness over the whole surface, were complained of, along with wheezing respiration, sharp pains in the eye-balls, headache, and lassitude."

In another case "an evanescent rash, of the character of urticaria, appeared on several occasions in the morning when the draught had been taken on the night before, and there was also some flushing and burning of the head and face."

In another, Dr. Crichton Browne says, "Soon after experiments with *Chloral* were commenced in this asylum, in February, 1870, I noticed a singular tendency to flushing of the head and face in many of those patients who were subjected to its influence. It was no uncommon thing to find a pale, anæmic patient, to whom *Chloral* had been given, presenting at certain hours of the day a floridness of countenance which would have done credit to the rudest health. Of forty cases in which *Chloral* was tried up to the month of June, and of which I possess notes, this blushing was remarked in nineteen, in greater or less degree; in a few suffusing only the cheeks, but in a much larger number involving the brow, neck, and ears, and assuming a depth of colour altogether unusual in the natural process. In one case, which is characteristic of many, I find it reported that half an hour after fifteen grains of *Chloral* had been taken the face, up to the roots of the hair and down to the ramus of the lower jaw, was of a dull scarlet colour, very persistent under pressure, most intense over he malar prominences and bridge of the nose, and thence shading off in very direction. The ears partook of the same colour, which was also scattered in blotches over the neck and chest, the lowest blotch being over the middle of the sternum, and the largest about the size of a florin. This ingular flushed condition, which was associated with slight contraction of the pupils, injection of the conjunctiva, and excitement of the circulation, continued for about an hour, and then disappeared during a paroxysm of sneezing and emotional perturbation, to recur after the next dose of *Chloral.*"

In some of these cases you will observe it stated that the conjunctivæ were injected, with varying amount of discomfort in the eyes.

The following case, reported by Dr. Fraser, shows the conjunctivitis well. Mrs. A—was subject to periodical headaches, and latterly to sleeplessness at night. When she consulted me in January, 1871, I ordered her for the sleeplessness *Chloral* in doses of thirty grains at bedtime. On seeing her a few days after she told me that the medicine had not given her sleep, but had caused excitement and greater restlessness, followed in the morning by redness and watering of the eyes, lasting for two days. She had again tried the *Chloral* before my seeing her the second time, and had found the same effect follow. I urged her to try it once more, which she did, and again the same result followed, viz., redness of the conjunctiva and watering of the eyes. She now discontinued the medicine, when the symptoms gradually disappeared. This patient afterwards found doses of gr. viiss produce the desired effect (sleep) without any of the above-mentioned symptoms.

Again, M. Demarquay states that, "on the attentive examination of animals so soporised (by *Chloral*), the ocular and palpebral mucous membranes are found injected." Dr. D. Gordon also observed "a peculiar papular eruption and a form of conjunctivitis as the result of *Chloral.*" The exact references to all these cases are to be found in my papers in the *Monthly Homœopathic Review* for June and September, 1871.

Having thus reminded you of the pathogenetic action of *Chloral* upon the skin and eye, I proceed to append cases where I have used *Chloral* in small doses in the treatment of *urticaria* and several forms of *ophthalmia.*

The dose I have always used has been a grain of the pure salt, dissolved in water three times a day, for adults, and fractions of a grain for children. I shall first take the *eye-diseases*.

Case. 1.—Martha W—, May 11th, 1872. Pain came on in left eye two days ago. To-day both ocular and palpebral conjunctiva much injected. There is a small ulcer on the cornea, and a good deal of pain. *Chloral* gr. j ter die. Eye to be bandaged up.

May 14th.—Redness completely gone, also the pain. Says she was quite well yesterday. The ulcer on the cornea is still visible, but only about the size of a pin-point.

Case 2.—John S—, May 18th, 1872. For two days has had conjunctivitis of right eye. To-day it is very much injected, with a good deal of pain. Left eye is also slightly injected. *Chloral* gr. j every four hours. Bandage to the eye.

May 20th.—Left eye quite well. Right eye almost well. Continue medicine. When next seen in three days was quite cured.

Case 3.—A baby, æt. 2 years. Has strumous conjunctivitis. General health not good. Sleeps badly and cries much, appetite bad, bowels regular. *Sulphur* 3 and Φ both failed to make any improvement, as also did *Bell. Chloral* gr. ¼ ter die was then given, with *Calcarea* 6 at bedtime. The child was brought back a week after, when there was very marked improvement. It could open its eyes much better to the light, showing a considerable diminution of the photophobia. Takes his food better, and sleeps well. Continue. Was not brought back again.

Case 4.—Mrs. S—, æt. 38, October 5th, 1872. Has been suffering from catarrhal ophthalmia for the last three or four days. There are one or two *phlyctenæ* on the right eye, at the edge of the cornea. Severe circumorbital pain and photophobia. *Chloral* gr. j ter die.

Oct. 10th.—Eye almost quite well; only slight injection remains. *Phyctenæ* quite gone, and the circumorbital pain has quite disappeared. No photophobia. Continue medicine.

Did not return, as the eye got quite well. This I ascertained when she after a time returned with another complaint.

Case 5.—Robert J—, æt. 9, October 25th, 1872. Has for a week had conjunctivitis of right eye; not much pain; is of a strumous family. *Chloral* gr. ½ ter die, and bandage over eye.

Oct. 30th.—Less redness of eye and ulcer on cornea. Left eye also similarly affected. Continue.

Nov. 4th.—Redness of both eyes gone. The corneal ulcers just visible and no more. Continue.

Dec. 2nd.—(A month later.) This boy returned to-day. The eyes had got quite well after last visit. He then took measles a week ago. To-day right eye is very red, and in the centre of the cornea is a rather deep cut ulcer, with a good deal of pain. *Chloral* gr. ½, as before. He did not return, which he certainly would have done, as before, if the eye had not got quite well.

Case 6.—Jane B—, æt. 25, January 4th, 1873. Has had conjunctivitis for three weeks in both eyes. Pain and smarting in eyes, especially in the evening and at night. Eyelids adhere together in the morning. *Chloral* gr. j ter die, and simple ointment at night applied to the edges of the lids.

January 15th.—Eyes much better, but a slight redness is still visible, especially on the palpebral conjunctiva. Continue *Chloral*, and to have a collyrium of *Sulphate of Zinc*.

Case 7.—Has been ill five months. There is conjunctivitis and corneitis on left eye. Cornea is dim. In right eye there is a cicatrix of an old ulcer on the cornea, and at one point considerable redness of the palpebral and ocular conjunctiva. A good deal of photophobia. *Chloral* gr. j ter die. Eyes to be bandaged.

This patient was particularly requested to return in a few days. She did not do so, and on inquiry I learned that she had got quickly well.

CASE 8—Alexander J—, æt. 16. For a month has had conjuctivitis of both eyes, worse during past week. A small ulcer on left cornea. Feeling of sand in the eyes, but almost no photophobia. Is a very strumous patient. *Chloral* gr. j ter die.

This patient did not return till some time after, with another complaint. The eyes had got quite well.

The following cases did not return at all, but, as I before stated, I count them as successful, as they were all told to return in a few days if not better.

CASE 9.—E. S—. æt. 12. Conjunctiva of one eye very red; an ulcer on the cornea, and a pink circle round it. Pain round orbit. Has been ill five days. *Chloral* gr. j ter die and a bandage to the eye..

Did not return.

CASE 10—Jane McI—, æt. 13. Inflammation of conjunctiva of both eyes, with a spot of injection in left eye, almost amounting to ecchymosis. A small quantity of muco-pus comes from the eyes. *Chloral* gr. j ter die.

Did not return.

CASE 11.—Helen S—, æt. 12, October 30th, 1872. Phlyctenular ophthalmia came on the day before. Palpebral and ocular conjunctiva of left eye very red. A phlycten at upper edge of cornea. A good deal of pain in the eye, but none round orbit. Right eye red and inflamed, but has no phlycten. *Chloral* gr. ½, and *Aconite*, every alternate two hours.

November 3rd.—Much better. Redness very much gone. Continue.

Did not return again. (By mistake this case is classed among those that did not return at all.)

CASE 12.—John T—, æt. 23. Five days ago right eye, and three days ago left eye, became inflamed. In right eye there is much redness, with chemosis, and a phlycten at edge of cornea. In left eye a good deal of redness, but no phlycten. Not much pain or photophobia. *Chloral* gr. j ter die and bandage to the eye.

Did not return.

The following are cases illustrating the action of *Chloral* in *urticaria* and *pruritus*:

CASE 1.—Jane W—, æt. 13, September 11th, 1871. On the 7th was taken ill with headache, sickness, and vomiting, which continued until the 10th, when an eruption appeared on the skin, which is very itchy, and rises in "white blister" on being scratched; affects chiefly the forearms and legs. No discoverable cause. *Chloral* gr. ½ ter die.

September 14th.—Much better, only a few slight patches of the eruption being found.

16th.—To-day is quite well, not the least appearance of anything on the skin, and no itching.

CASE 2 and 3.—Mrs. S—, æt. 38, and her son George, æt. 8, February 5th, 1872. Complains of a rash coming out every night, and almost disappearing during the day, "like the sting of a nettle." Has lasted for a week. It is very itchy, and after washing with soap and water becomes painful. Keeps them from sleep at night. General health good. No stomach disorder. The mother has her catamenia every two months, lasting ten days, and leaving her with a feeling of giddiness in the head. *Chloral* 1 gr. ter die, and gr. ¼ for her son.

February 10th.—On the first night after the above report had the rash as before, since which she has been quite free of it. The little boy is also quite well.

Case 4.—Mrs. McG—, æt. 30, February 6th, 1872. Is eight months pregnant. Had erysipelas ten days ago. To-day complains of nettle-rash, which has come on since the erysipelas disappeared. Has had it before several times. The rash comes out when she is warm and in bed, and itches very much. Headache on left side, especially at the inside of the left eye. Tongue clean, bowels regular. *Chloral* gr. 1 ter die.

February 13th.—Is much better. The urticaria has not, however, entirely left her. Continue med.

Since this report up to the present time (March, 1874) she has had frequent attacks of it, and always asks for "the medicine for the nettle-rash," saying she never had anything that relieved her so much.

Case 5.—Miss K—, æt. 50. For some days has had itchiness of the chin and front and back of the neck, coming on towards morning—sensation like minute insects or hairs. Otherwise quite well. *Chloral* gr. 1 ter die. This quickly cured the affection.

Case 6.—A child, æt. 3. Had well-marked nettle-rash for a month. *Chloral* gr. 1 ter die. As I afterwards learned, this child got well, and the mother did not think it necessary to bring it back again.

Case 7.—A. B—, æt. 25, November 9th, 1872. Complained of sickness and vomiting for two days with headache and sore throat. When seen had urticarious blotches over body, which are very itchy. Pulse 90 ; temp. normal. *Chloral* gr. 1 ter die (no discoverable cause).

November 11th—Rash quite gone.

Case 8.—Peter B—, æt. six months, November 9th, 1872. Had been ailing for several days. When seen had blotches of redness over legs and body in distinct wheals, not much fever. Bowels regular. Is weaned. Takes his food well. *Chloral* gr. ¼ ter die.

11th.—Rash much faded.

12th.—Is quite well.

Case 9.—Alexander G—, æt. 2½. Had for some time been much troubled with an urticarious eruption, which disappeared by day and came out at night, with such itching as to keep him from sleep. No discoverable cause. *Chloral* gr. ¼ ter die in two or three days so removed it as to give him quiet sleep, free from itchiness. The same has since recurred two or three times, and has always been removed by the *Chloral.*

Case 10.—Agnes G—, æt. 28, September 26th, 1872. Has had hæmorrhoids for the last eleven years, which were at first external, but are now chiefly internal ; bowels scarcely ever open without purgative medicine. Complains also of pruritus of the vulva, and down-bearing pains in the hypogastric region. Is at present six months advanced in pregnancy, *Nux vom.* and *Sulph.* at bedtime.

October 3rd.—Much better. Says she is no longer troubled with the hæmorrhoids, and that the bowels open naturally every day ; the bearing-down pains in the hypogastric region are also quite gone. Says she feels quite well, except that the pruritus vulvæ is very troublesome. *Sulph.* φ bis die.

14th.—No better of the pruritus. *Collinsonia.*

21st.—No better. *Chloral* gr. 1 ter die.

31st.—Pruritus almost quite gone.

Sleeps comfortably at night now. The piles are again troubling her, for which she is again put on treatment for them. She did not return.

The following cases did not return at all, but being always requested to do so if not improved, I class them as successful.

Case 11.—Miss S—, æt. 15, October 12th, 1872. Cannot sleep at night for itchiness of skin of whole body. Has had it for three weeks. Skin of body gets quite red. Redness and itching gone by the morning. Is quite well otherwise. Nothing at present to be seen except remains of scratching. *Chloral* gr. 1 ter die. Did not return.

CASE 12.—Mrs. J—, æt. 21. Has had nettle-rash for a month, comes out chiefly in afternoon, and goes in again at bed-time. Sleeps well enough. The eruption is on the arms and face only. Tongue clean. No dyspepsia. Bowels rather costive. Catamenia regular till last time, when she is now a fortnight past time. Head aches. *Chloral* gr. 1 ter die. Did not return.

CASE 13.—George C—, æt. 16 months. For the last two days has had a well-marked urticarious eruption, which makes its appearance on every part of the body, and is much worse at night. *Chloral* gr. ½ ter die. Did not return.

CASE 14.—Ellen S—, æt. 23, a servant. Since coming to town ten weeks before has had an eruption, red, and in spots the size of a sixpence or shilling all over the body. It does not come out through the day, but at night keeps her awake from the itching, making her afraid to go to bed. Head aches every day across the forehead, coming on in the morning and going off in the evening. Tongue clean. Appetite not so good as in the country. No dyspepsia. Bowels and catamenia regular. *Chloral* gr. 1 ter die. This patient was particularly requested to return if not better, but did not do so.

CASE 15.—Joseph A—, æt. 2, September 21st, 1871. On getting warm a cutaneous eruption makes its appearance, chiefly on the breast and limbs ; before coming out he gets sick and has headache ; the eruption is of a diffuse mottled character, and of a bright red colour ; is not itchy, and disappears on the surface of the body being cooled ; pulse quiet, tongue clean, bowels quite regular. There has been no coryza nor cough. *Chloral* gr. ½ ter die. Did not return.

CASE 16.—Mary J. D—, æt. 6. Has had nettle-rash all over body for four days ; very itchy, worse at night, and when warm. Tongue clean. Bowels regular. Appetite good. No cause discoverable. *Chloral* gr. ½ ter die. Did not return.

I have only stated in some of the cases that no cause was discoverable, but I should have stated in all. This is, of course, a point of some importance, as certain articles of diet are known to produce urticaria in many people. Of course, in such cases, the urticaria passes off without medicine, and would be worth nothing to prove the efficacy of any drug.

I have only now to apologise for the length of this paper and the number of cases appended, but in giving proof of the value of two new medicines I thought it of importance to prevent, if possible, any doubts as to their efficacy, which the enumeration of only two or three cases might have provoked.—*The British Journal of Homœopathy,* July 1874.

SOLAR AND LUNAR INFLUENCE.

CHARLOTTE, N. C., *January 17th*, 1874.

Dr. S. LILIENTHAL, New York :

MY DEAR DOCTOR,—Dr. Hering has spoken on Solar and Lunar Influence in the January number of the *Hahnemannian Monthly*, and Dr. Carroll Dunham corroborates his observations on the subject.

This breaks the ice, and I do not hesitate to contribute my mite of information on this point for your valuable journal without fear of being considered a "solatic" (to coin a word) or "lunatic." The following case occurred in Barranquilla, U. S. of Colombia, South America, and offers a potent proof of the influence of the moon upon the human body, and also upon an inert substance, converting it into a remedy :

Mrs. N. N., wife of a well-to-do merchant, aged 35, had suffered two years from excessive metrorrhagia, lasting from ten to twenty days at each catamenial period, accompanied with excessive menstrual colic, and such an excessive flow, that she was exceedingly debilitated and reduced to such a condition that to use her own words, "death was preferable to such an agonizing existence." Her husband had employed every old-school physician in the city, and several celebrated physicians passing through the city, without her getting any relief from the colic, or any means proving successful in checking the flow. Lastly, a Homœopathic physician took the case, but could only afford her slight relief from pain, and shorten a little the time of the flow. This professor never gave any remedy as high as the 30th potency ! She then called another Homœopath, friend of mine, and he gave her a great many remedies from Ø up to 8^{m} (Jennichen) without doing more than his confrére had done.

The case perplexed him exceedingly, and he made a prolonged study of it with no further advancement.. At this stage I was consulted, and we discussed the subject of *Lunar Influence* at length. In the tropics this is much more powerful than in colder or temperate climates. It is a universal custom among the fishermen, both in salt and fresh waters, *never to fish while the moon is up*, for all fish taken out of the water after the moon is above the horizon spoil at once or decompose, even though thoroughly salted, and any fresh fish or fresh meat hung up, exposed to the moonlight for even an hour, decomposes at once, even though salted with the greatest possible care.

When the moon is nearly full, many persons who lie down in the open air, exposed to its rays, suffer pains and œdema of the parts exposed, on the ensuing day, and sometimes they lose their reason when the moonlight is concentrated on the head ; hence, no doubt the origin of the word "luney" or "lunatic," or moonstruck. I have treated several of these cases with the remedies recommended in the manuals, but never with rapid success till I had discussed the subject in my own mind awhile, and argued thus : If the moonlight *causes* the pain and œdema, there must be virtue in moonlight *to cure* it ; so I exposed a glass half full of pure water to the direct and reflected light of the moon for three or four hours ; at the end of this time I poured the water into a perfectly clean bottle, and shook it well for a moment or two. The next day I had a case of œdema of face and hands, with violent pains in the swollen parts, of a neuralgic nature, in a stout negro, of about 35 years of age, who had slept the night previous in the open air, expossed to the rays of *the full moon.* I gave him about two ounces of the prepared water from the bottle marked "Luna" Ø with directions to take a spoonful every hour till relieved—this at 8 A.M. ; at 12 M., and after having taken three doses of "*Luna*" he was relieved of all pain, and at 4 P.M. *the œdema had entirely abated.* After such marked success, I treated several similar cases with *Luna*, Ø with the same unvarying quick relief. Reminding my friend, the Doctor, of these cases, I asked him if he had noticed whether Mrs. N. N.'s sufferings were aggravated at the time of full moon. This he had not noticed, but made a note of it to report at a future conference. About a month later, we met one evening, and he said that two days previously (*the day after full moon*) Mrs. N.N. was taken suddenly with the most violent attack of metrorrhagia she had ever had, and her pains were most excruciating. Then I replied, we must have found the key to the enigma ; if I am right moonlight causes the disease, moonlight will cure it—give her *Luna* ψ. A glass was prepared that night and sent to her the next morning, with directions to take a table-spoonful every hour till relieved ; at the *third* dose the flow and pains ceased as if by magic. The ensuing month pains and flow presented themselves as usual, but *two* doses relieved entirely. A month later, pains and flooding again, but a single dose sufficed this time, and the month following, menstruation was normal—no pains or excess of flow. Thus, this patient, after two years suffering and agony, was restored to perfect health. Three years afterwards there had been no relapse. After her cure, she remembered distinctly that every time she sat exposed to the moonlight at the full of the moon her sufferings were in every way aggravated ; when she kept in the house at this epoch she suffered much less—now she sits exposed to the moonlight for three or four hours with impunity.

We prepared *Luna*, and potentized it up to the 13th potency—a powder of which I have furnished to Dr. Samuel Swan, 13 West Thirty-eighth-street, New York, and it will soon be potentized up to the *cm* potency by his new potentizing machine, just finished. I have used it for *all cases of abnormal menstrual troubles which are aggravated at the period of full moon*, at the 6th cent. potency, without having, as yet, to record a case of failure. Relating the preceding case to Dr. Swan, in December, 1872, he prepared some Sac. lac. by exposure to the concentrated rays of the sun and has had this potentized by Dr. Fincke up to the *cm*, and with different high potencies has cured several cases of headache where patients could remember having suffered at any previous time *by exposure to the sun*. I believe that in such cases, which do not yield readily to other remedies, it will prove a specific ; and, as such, of great value in our M. Medica. Dr. Fincke has potentized *luna* up to the *cm* potency ; but this is from the moonlight in our climate, which, I think, may possibly be less powerful than the preparation I brought from South America ; but, as yet, I have not had any opportunity of testing it so as to institute any comparison between the effects developed by the one and those developed by the other.

Yours fraternally,

S. B. HIGGINS.

—*The North American Journal of Homœopathy.* May, 1874.

चरकसंहिता ।

सूत्रस्थानम् ।

चतुर्थोऽध्याय : ।

इति पञ्चाशन्महाकषायाः महताञ्च कषायाणां लक्षणोदाहरणार्थं व्याख्याताः । तेषामेकैकस्मिन्महाकषाये दशदशावयविकान् कषायान् व्याख्यास्यामः । तान्येव पञ्चकषायशतानि भवन्ति ॥ तद्यथा ॥ २४ ॥

जीवकर्षभकौ मेदा महामेदा काकोली क्षीरकाकोली मुद्गमाषपर्ण्यौ जीवन्तीमधुकमिति दशेमानि जीवनीयानि भवन्ति ॥ २५ ॥

CHARAKA SANHITA.

CHAP. 4. SHARVIRECHANA SATASRITYA.

24. Thus altogether we have fifty principal varieties of extracts. As examples of the principal varieties of extracts, the fifty principal varieties have been described. Of each of these fifty varieties, we shall describe ten sub-varieties. And thus we have altogether five hundred of these sub-varieties; which are as follow :—

25. Jívaka, risabhaka, medá, mahámedá, kákolí (কাঁকলা), ksírakakolí (ক্ষীরকাঁকলা), mudgaparní (মুগাণী, dolichos stipulaceus glycine triloba, or phaseolus trilobus), máshaparní (মাষপর্ণী glycene debilis), jívanti, madhuka,—these ten form jivaníya.

क्षीरिणी राजक्षवक बलाकाकोली क्षीरकाकोली वाट्यायनी भद्रोदरी भारद्वाजी पयस्यर्ष्यगन्धा इति दशेमानि बृंहणीयानि भवन्ति ॥ २६ ॥

मुस्त कुष्ठ हरिद्रा दारुहरिद्रा वचातिविषा कटुरोहिणी चित्रक चिरबिल्व हैमवत्यइति दशेमानि लेखनीयानि भवन्ति ॥ २७ ॥

सुवहार्कोरुबूकाग्निमुखी चित्राचित्रक चिरबिल्व शङ्खिनी शकुलादनीसुवर्णक्षीरिण्य इति दशेमानि भेदनीयानि भवन्ति ॥ २८ ॥

मधुकमधूकपृश्निपर्ण्यम्बष्ठकीसमङ्गामोचरसधातकीलोध्रप्रियङ्गु कट्फलानीति दशेमानि सन्धानीयानि भवन्ति ॥ २९ ॥

26. Ksírini, rájakshavaka (হাঁচিতা), vala (গোরক্ষচাকুলিয়া) kákolí, ksirakákolí, vátyáyaní (বেলেড়া, sida cordifolia), bhadrodarí (হলদে বেলেড়া), bháradvájí (বনকাপাস, hibiscus vitifolius), payasya (ভুমিকুষ্মাণ্ড, trichosanthes cordata), rishyagandha (ছোটবীজতাড়ক, convolvulus argentea),—these ten form bringhaníya.

27. Musta (মুতা), kushtha (কুড়), haridrá (হরিদ্রা) dáruharidrá (দারুহরিদ্রা), vacha (বচ), atibisha (আতইচ), katurohiní (কট্‌কি), chitraka (চিতে), chirabilva (নাটা করঞ্জ), haimavati (শ্বেতবচ),—these ten are lekhaníya.

28. Suvahá (তেউড়ী), arka (আকন্দ), ruvuka (এরণ্ড), agnimukhí (ভেলা, semecarpus anacardium), chitrá (দন্তী), chitraka (চিতে), chiravilva, sankhiní নিমুক, cissampelos hexandra), sákuládaní (কটকি), suvarna ksiriní (সোনা ক্ষীরুই),—these ten are bhedaníyáni.

29. Madhuka (যষ্টিমধু), Madhúka (মউল), prisniparní (চাকুলে), ambasthakí (আক্নাদী), samangá (বরাহক্রান্তা, lycopodium imbri-

पिप्पलीपिप्पलीमूलचव्यचित्रकशृङ्गवेराम्लवेतसमरिचाजमोदाभल्लातकास्थिहिङ्गुनिर्य्यासा इति दशेमानि दीपनीयानि भवन्ति ॥ इतिषट्कः कषायवर्गः ॥ ३० ॥

ऐन्द्री ऋषभीअतिरसाऋष्यप्रोक्ता पयस्या अश्वगन्धा स्थिरा रोहिणी बला अतिबला इति दशेमानि बल्यानि भवन्ति ॥ ३१ ॥*

चन्दनतुङ्ग पद्मकोशीर मधुक मञ्जिष्ठासारिवापयस्या सिता लता इति दशेमानि वर्ण्यानि भवन्ति ॥ ३२ ॥

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catum), mocharasa (মোচরস, শিমুলের আঠা), dhátakí (ধাইফুল, grislea tomentosa), lodhra (লোধ), priyangu, (প্রিয়ঙ্গু), katphala (কায়ছাল),—these ten are sandhániyani.

30. Pippalí (long pepper), pippali múla (root of long pepper), chavya (চৈ), chitraka (চিতে) sringavera (dried ginger), amla vetasa (rumex vesicarius, চুকপালঙ্গ), maricha (round pepper), ajamodá (যোয়ান), bhallátakasthi (seed of the bhela, anacardium orientale), hinguniryása (asafœtida),—these ten are dípaníyáni.

These are six Kasáya varga.

31. Aindrí (রাখাল শশা), risabhí (আলাকুশি), atirasá (শতমূলী), rishyaproktá (মাষাণী), payasyá (ক্ষীরকাকোলী), asvagandhá, sthirá (শালপাণী), rohiní, valá, ativalá (হলদে বেলেড়া),—these ten are valyáni.

32. Chandana (red sandal wood), tunga (নাগেশ্বর), padmaka (পদ্ম কাষ্ঠ), usíra (বেনারমূল), madhuka, (মৌল), manjisthá (Bengal madder, rubia manjith), sárivá (hemedesmis indica), payasyá, sitá (শ্বেত দুর্ব্বা), lata (শ্যাম দুর্ব্বা),—these ten are varnyáni

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* To render it clear we have broken up the *sandhi* in this sentence. With *sandhi* it would stand thus: ऐन्द्र्यर्षभ्यतिरसर्ष्यप्रोक्तापयस्याश्वगन्धा स्थिरारोहिणीबलातिबला ॥

सारिवेक्षुमूल मधुक पिप्पली द्राक्षा विदारी कैटर्य्य हंसपादी बृहती कण्टकारिका इति दशेमानि कण्ठ्यानि भवन्ति ॥ २३ ॥

आम्राम्रातकलकुच करमर्द्दवृक्षाम्लाम्लवेतसकुवल बदरदाड़िम मातुलुङ्गानीति दशेमानि हृद्यानि भवन्ति ॥ इति चतुष्कः कषायवर्गः ॥ ३४ ॥

नागरचव्यचित्रकविड़ङ्गमूर्व्वा गुडूची वचा मुस्त पिप्पली पटोलानीति दशेमानि तृप्तिघ्नानि भवन्ति ॥ २५ ॥

कुटजबिल्वचित्रकनागरातिविषाभया धन्वयासक दारुहरिद्रा वचा चव्यानीति दशेमानि अर्शोघ्नानि भवन्ति ॥ २६ ॥

33. Sáriba, iksumul (root of the sugarcane), madhuka (liquorice), pippali, dráksá (raisins), vidári (ভুমিকুষ্মাণ্ড), kaitaryya (কটফল), hansapádi (clitoria ternata ?), vṛihatí (বৃহতী), kantakári (কণ্টকারি, solanum jaquini), —these ten are kanthyáni.

34. Amra (mango), amrátaka (আমড়া), lakucha (মান্দার, artocarpus lakucha), karamarda (করমচা, carissa carondas), vriksámla (tamarind), amlavetasa, kuvala (a species of plum), vadara (zyzyphus jujuba, a species of plum), dáḍima (pomegranate), mátulunga (citrus medica),—these ten are hṛidyáni.

These are four kasáyavarga.

35. Nágara (dry ginger), chavya (চৈ,) chitraka (চিতা), viḍanga, múrva (sanseviera Roxburghiana, bowstring hemp, মুর্গা), guḍuchi, vacha, musta, pippali, patola (trichosanthes diœca, পল্তা),—these ten are tṛiptighna.

36. Kutaja, vilva, chitraka, nágara, ativisha, abhayá, dhanvayásaka (hedysarum alhaji, দুরালভা), dáruharidrá, vacha, chavya,—these ten are arshaghna.

खदिराभयामलक हरिद्रारुष्कर सप्तपर्णारग्वध करवीर विडङ्गजातीप्रवालाइति दशेमानि कुष्ठघ्नानि भवन्ति ॥ ३७ ॥

चन्दन नलदनक्तमाल कृतमाल निम्बकुटज सर्षप मधुक दारुहरिद्रा मुस्तानीति दशेमानि कण्डूघ्नानि भवन्ति ॥ ३८ ॥

अक्षीव मरिच गण्डीर केबूक विडङ्ग निर्गुण्डे किणिही श्वदंष्ट्रा वृषपर्णिका सुपर्णिकाइति दशेमानि कृमिघ्नानि भवन्ति॥ ३९ ॥

हरिद्रा मञ्जिष्ठा सुवहा सूक्ष्मैला पालिन्दी चन्दन कतक शिरीष सिन्धुवार श्लेष्मातका इति दशेमानि विषघ्नानि भवन्ति॥ इति षट्कः कषायवर्गः ॥ ४० ॥

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37. Khadira (catechu, খয়ের), abhaya, ámlaka, haridrá, arushkara (ভল্লাতক, semecarpus anacardium), saptaparna, áragvadha, karavíra, víḍanga, jatipravála (sprouts of emblic myrobalan, phyllanthus emblica),—these ten are kushṭhaghna.

38. Chandana (red sandal wood), nalada (জটামাংসী, valeriana jatamansi), naktamála (ডহরকরঞ্জ, galledupa arborea), kritamála (শোনালু, cassia fistula), nimba, kuṭaja, sarshapa, madhuka, dáruharidrá, musta,—these ten are kaṇḍughna.

39. Aksíva (শোভাঞ্জন, শজিনা, guilandína or hyperanthera morunga), marícha, gaṇḍíra (শালিঞ্চা, a species of potherb growing in watery ground), kevúka (কেঁউ), viḍanga, nirgundí (নিসিন্দা, vitex nigunda), kiṇiht (কটভী,) śvadanstra (গোখুর, flacourtia cataphracta), vrishaparni (ইন্দুরকানী পানা, salvinia cucullata), ákhuparni,—these ten are krimighna.

40. Haridrá, manjisṭhá, suvahá (রাস্না), súksmailá (small candamoms), pálindí (শ্যামালতা, convolvulus turpethem), chandana, kataka (নির্মলীফল, clearing nut, strychnos potatorum), śirísha, sindhumvára, śleshmátaka (বহুবার, বহুযারি, cordia myxa),—these ten are vishaghna.

वीरण शालि षष्टिक इक्षुवालिका दर्भकुशकाशगुन्द्रेत्कट कत्तृणमूलानीति दशेमानि स्तन्यजननानि भवन्ति ॥ ४१ ॥

पाठा महौषधसुरदारु मुस्त मूर्व्वा गुडूची वत्सकफल किराततिक्त कटुरोहिणी सारिवा इति दशेमानि स्तन्यशोधनानि भवन्ति ॥ ४२ ॥

These are six varieties of extracts.

41. Vírana (উশীর, andropogon muricatum), śali (হৈমন্তিক ধান্য, paddy of hemanta), shashtika (যষ্টিদিনভব ধান্য, rice of quick growth), íksuválika (saccharum spontaneum), darbha (উলু), kuśa, káśa, gundrá, itkata, kattṛina,—the roots of these ten are stanyajananíya.

42. Páṭhá (আকনাদি), mahaushadha (dry ginger), suradáru, musta, murva (মুর্বা, sanseviera Roxburghiana), guduchi, fruit of vatsaka (ইন্দ্রযব), kirátatikta চিরাতা, gentiana chireta), katurohiní, sárivá,—these ten are stanyaśodhaníya.

(*To be Continued.*)

We have to tender our best thanks to the Editors of the following Periodicals for regularly exchanging with us :—

The Indian Medical Gazette.
The British Journal of Homœopathy (H. Turner & Co., London).
The Monthly Homœopathic Review (H. Turner & Co., London).
The American Journal of Homœopathic Materia Medica.

The United States Medical and Surgical Journal.
The American Homœopathic Observer.
The Western Homœopathic Observer.
The American Homœopathist.
The New England Medical Gazette.
(We have not received these Journals for some time past.)
El Criterio Medico (Madrid).
La Reforma Medica (Madrid).
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THE MATERIA MEDICA.

37.—CONIUM MACULATUM—HEMLOCK.

Nat Ord Umbelliferæ.

Distinctive Characters "In distinguishing Conium maculatum from other Umbelliferæ, the following characters should be attended to.—The large, round, smooth, spotted *stem*, the smooth, dark, and shining green colour of the lower *leaves*, the *general involucre* of from 3 to 7 leaflets, the *partial involucre* of 3 leaflets, the *fruit* with undulated, crenated, primary ridges. To these must be added, that the whole *herb*, when bruised, has a disagreeable smell (compared by some to that of mice, by others to that of fresh cantharides, or of cats' urine).

"The indigenous Umbelliferæ most likely to be confounded with Conium maculatum are, *Æthusa Cynapium* and *Anthriscus vulgaris*. ÆTHUSA CYNAPIUM, or *Fool's Parsley*, is distinguished from hemlock by its smaller *size*, by the absence of the strong disagreeable smell which distinguishes the *leaves* of hemlock, by the want of a *general involucre*, by the 3 long, narrow, unilateral, pendulous leaflets composing the *partial involucre*, by the *ridges* of the *fruit* being entire (*i. e.* not undulate or crenate), and by the presence of *vittæ* ANTHRISCUS VULGARIS, or *Common Beaked-Parsley*, is known from hemlock by the paler colour and slight hairiness of the *leaves*, by the absence of spots on the *stem*, by the swelling under each joint, by the absence of a *general involucre*, by the roughness of the *fruit*, and by the absence of a strong unpleasant odour when the *leaves* are bruised. ANTHRISCUS SYLVESTRIS (*Chærophyllum sylvestre*), or *Common*

Cow-Parsley, is scarcely likely to be confounded with hemlock. The stem, though purplish, is striated, downy at the lower part, and slightly swollen below the joint; the leaves are rough-edged; there is no general involucre; and the partial one usually consists of 5 or more leaflets."—Pereira: *Materia Medica.*

Habitat: Indigenous in Europe and in the temperate regions of Asia. It is common in England and grows abundantly in Spain, South of France, Sicily, and Greece, especially between Megaræ and Athens. It has been introduced into North America and Chilli, where it is found in cultivated parts. It "prefers fat and strong soil, amidst ruins, along the borders of empty ditches, woods, &c." (*Teste*), "hedges and waste ground, especially near towns and villages." (*Pereira*).

History: Haller among others maintained that it is the *Cicuta Virosa* and not the *Conium Maculatum* which was the *Koneion* of the Greeks. This opinion is no longer tenable. The description of the *Koneion* by Dioscorides leaves no doubt that it was an umbellifer, and the only poisonous umbellifer that grows in Greece is the *Conium Maculatum* which is called *Koneion* by the Modern Greeks. Besides, the symptoms of the death of Sokrates so remarkably agrees with the symptoms of poisoning by Conium as observed in our own days, that we have the strongest physiological proof of the identity of the two plants. To enable our readers to compare for themselves, we give the symptoms of poisoning in Sokrates as related by Plato, and in a case as related by Dr. Hughes Bennet.

Case of Sokrates.

"But he (Sokrates), when he found (after having drunk the poison), during his walking, that his legs felt heavy, and had told us so, laid himself down in a supine position. For the man had ordered him to do so. And at the same time, he who gave him the poison, touching him at intervals, considered his feet and legs. And after he had vehemently pressed his feet, he asked him if he felt it. But Sokrates answered he did not. And, after this, he again pressed his thighs and thus ascending with his hand, he showed us that he was cold and stiff. And Sokrates also touched himself, and said that when the poison reached his heart he should then leave us. But now his lower belly was almost cold when, uncovering himself (for he was covered), he said (which were his last words), Crito, we owe a cock to Æsculapius. Discharge this debt, therefore for me and do not neglect it. It shall be done (said Crito); but consider whether you have any other commands. To this inquiry of Crito he made no reply; and shortly after moved himself (was convulsed), and the man covered him. And Sokrates fixed his eyes."

Dr. Bennet's case of Duncan Gow.

From his own house, at the head of the Canongate, Gow walked about half a mile to the house of one Wright, in the West Port, with a view of selling him some small matter. Wright, on his entering the room, thought at first that he was intoxicated, because he staggered in walking. On passing through the door also, which was narrow, he faltered in his gait, and afterwards sat down hastily. He stayed ten minutes, during which time he conversed readily, drove a hard bargain, and obtained four pence for what he sold. He did not complain of pain or uneasiness, was not excited in manner or speech. and his face was pale and wan. On rising from his chair, he was observed by Wright's boy to fall back again, as if he had some difficulty in rising. On making a second effort he got up, and was seen by Wright's wife to stagger out of the house and down the steps. This was a little after four o'clock.

On leaving Wright's house, he was next seen standing with his back against the corner of the street, by Andrew Mc'All, a meal-dealer in the Grassmarket, about 200 yards from Wright's house. Mc'All saw him leave the corner he was leaning against, and stagger to a lamp-post a few yards further on. Here he again paused for a few minutes, and then again went forward in the same vacillating manner, passed Mc'All's shop, and sat down at the opening of the common stair next to it. Mc'All's words are, "He could not walk rightly, and was staggering as a man in liquor." His mode of progression attracted a number of boys and girls, who laughed at him, believing him to be intoxicated. Was heard to speak to them, but what he said is not known. He was also seen by two women, who told a policeman to take him away.

The policeman (James Mitchell, No. 161) told me that, on finding Gow sitting at the foot of the common stair, he thought he was drunk. He spoke to him, and in reply Gow desired to be taken to his own house, at the top of the Canongate. He also said that he had completely lost his sight, and had not the perfect use of his limbs, but expressed his willingness to walk forwards, until the policeman could obtain the assistance of his comrade in the Cowgate. He was then raised up and supported by one arm, but, after moving with great difficulty past four or five shops, his legs bent under him, and he fell upon his knees. Mitchell then gave him some water to drink, which he was incapable of swallowing, and left him to get a barrow. On his return he found him surrounded by women, who were pouring cold water on his head, and sprinkling his forehead. With the assistance of another policeman (James Hastie, No. 111), he was then placed on the barrow. One of the women, Mrs. Anderson, on his being raised, saw that he made no attempt to walk, but that, as he was pulled away by the policemen, his legs were dragged or trailed after him.

The second policeman, Hastie, on first seeing him, told Mitchell that it was not drink, but a fit, that was the matter with him. He lifted up his eyelids and found the eyes dull. He seemed sensible, and endeavoured to say something, but could not articulate. He was now slowly conveyed to the main police-office in the High Street, where he arrived about six o'clock. Mitchell told the police lieutenant on duty that, from the manner in which the man was lying, and from the loss of power in the legs, he now thought he was *not* intoxicated. At this period it would seem that, although the limbs were completely paralysed, the intelligence was still perfect, for he told the turnkey his exact address in the Canongate, in reply to a question.

Dr. Tait, surgeon to the police force, was now sent for, and saw him about a quarter past six. In reply to a note which I addressed to him on this subject, he says:—

"The first impression produced on my mind from his appearance was, that he was in a state of intoxication: he was then lying on his back, with his head and shoulders elevated upon a board we have in the office for that purpose. He was sensible when I spoke to him, and tried to turn his face towards me, and slightly raised his eyelids, but appeared unable to speak. His power of motion appeared completely prostrated, for when I lifted his arm, and laid it down, it lay where it was put; and when his arm-pits were tickled, he seemed to manifest a little sensibility, but could make no exertion to rid himself of the annoyance. There were occasional movements of the left leg, but they appeared rather to be spasmodic than voluntary. Several efforts were made to vomit, but these were ineffectual. His pulse and breathing were perfectly natural. He had spoken to the turnkey a few minutes before I arrived. Heat of skin natural. I visited him again, about ten minutes before seven o'clock, at which time all motion of the chest appeared to have ceased; the action of the heart was very feeble and the countenance had a cadaveric expression; pupils fixed. He was then sent to the Infirmary."

He was conveyed to the Infirmary by Hastie and another policeman, M'Pherson. After being put on the stretcher, Hastie saw him draw the legs gently upwards, as if to prevent their hanging over the iron at its extremity. This was the last movement he was seen to make. On being carried into the waiting room of the Infirmary, he was visited by the house-clerk on duty, who found him pulseless, and declared him, as previously stated, to be dead. This was shortly after seven o'clock P. M.

Sectio Cadaveris. Sixty-three hours after death.

The body was well formed and muscular. There were no external marks of violence. The back and depending portions were livid from sugillation.

Head.—An unusual quantity of fluid blood flowed from the scalp and longitudinal sinus when divided. There was slight serous effusion below the arachnoid membrane, and about two drachms of clear serum in the lateral ventricles. The substance of the brain was soft throughout; on section presented numerous bloody points, but was otherwise healthy. No fracture could be discovered in any part of the cranium.

Chest.—There were slight adhesions between the pleuræ on both sides superiorly. The apices of both lungs were strongly puckered. On the right side below the puckering, were two cretaceous concretions, the size of peas, surrounded by chronic pneumonia and pigmentary deposit. On the left side only induration, with hard, black, gritty particles, existed below the puckering. The structure of the lungs otherwise was healthy, although they were throughout intensely engorged with dark-red fluid blood. The heart was healthy in structure, but soft and flabby. The blood in the cavities was mostly fluid, presenting only here and there a few small grumous clots.

Abdomen.—The liver was healthy; the spleen soft, readily breaking down under the fingers. The kidneys were of a brownish-red colour throughout, owing to venous congestion, but healthy in structure. The stomach contained a pultaceous mass, formed of some raw green vegetable resembling parsely. Its contents weighed eleven ounces, and had an acid and slight spirituous odour. The mucous coat was much congested, especially at its cardiac extremity. Here there were numerous extravasations of dark-red blood, below the epithelium, over a space about the size of the hand. The intestines were healthy, here and there presenting patches of congestion in the mucous coat. The bladder was healthy; its inner surface much congested from venous obstruction.

The Blood throughout the body was of a dark colour and fluid, even in the heart and large vessels.

Composition: The following are Schrader and Brandes' analyses :—

Schrader.	Hemlock.	Cabbage.
Extractive	2.73	2.34
Gummy extractive	3.52	2.89
Resin	0.15	0.05
Vegetable albumen	0.31	0.29
Green Fecula	0.80	0.63
Water, with Acetic acid and Salts	92.49	93.80
Total	100.00	100.00

Brandes. Hemlock.
Peculiar basic principle (*Conicine*).
Very odorous oil.
Vegetable Albumen.
Resins.
Colouring matter.
Salts.
[Lignin and Water.]

It appears from the analysis of Schrader that Cabbage which is an edible vegetable has almost the same composition as Hemlock, a deadly poison. This shows how little ultimate analysis is to be depended upon for gaining a knowledge of the physiological properties of drugs. The active principle of Conium is a peculiar base which has been variously called *Conia, Conine, Conicine.* It exists in large quantities in the green unripe fruit, in the leaves and in fact in the whole plant, except the root where it exists in very very minute proportion. The base seems to exist in combination with an acid which has been called *Coniic acid* by Peschier. Its composition according to Liebig, is C_{12} H_{14} No; but it has been shown by Ortigosa, Blyth and Wurtz to be devoid of nitrogen. Conia is soluble in alcohol in all proportions, not very soluble in water, and remarkably enough more soluble in cold than in hot water. It is liquid at ordinary temperatures, is volatile, and reddens turmeric paper. It is a strong base and behaves like ammonia, precipitating oxide of silver from the nitrate and redissolving it by excess; it dissolves chloride of silver just as ammonia does; its vapour forms fumes with the vapour of hydrachloric acid, exactly as ammonia does. It is a deadly poison. It killed a rabbit in nine minutes, one drop having been dropped into the eye; a cat in a minute and half, three drops having been used in the same way; and a dog in one minute, five drops having been poured into the throat, Christison thus sums up its physiological properties :—" It is in the first place, a local irritant. It has an acrid taste; when dropped into the eye, or on the peritoneum, it causes redness or vascularity; and to whatever texture or part it is applied, expressions of pain are immediately excited, but these local effects are soon overwhelmed by the indirect or remote action which speedily follows. This consists essentially of swiftly spreading palsy of the muscles,—affecting first those of voluntary motion, then the respiratory muscles of the chest and abdomen, lastly the diaphragm, and thus ending in death by asphyxia." The cerebrum does not seem to come under its influence, as consciousness remains intact to the last.

Hemlock contains a volatile oil to which it seems to owe its characteristic odor. It is of an acrid taste, but does not appear to possess poisonous properties. According to Harley the root of Hemlock contains, besides a minute proportion of conia, a bitter resin which he calls *conamarine,* and two neutral bodies, *rhyzoconine* and *rhyzoconylene,* which are volatilizable with water at between 220° and 250° F., and seem to be devoid of poisonous properties.

Off. Part: The whole plant without the radix.

Post Mortem Appearances.

These have been seen in the case related by Dr. Bennet. The great peculiarity observed in all cases of poisoning by Conium was the *fluidity* of the blood. This is of interest in relation to viperine poisoning, in which this phenomenon is observed in contrast with colubrine poisoning in which the blood is found in a coagulated state in the vessels and chambers of the heart.

Old School Uses: Teste in his *Homœopathic Materia Medica* has given such a good *resumé* of the empirical applications of the Drug by the Old School that we are tempted to give it entire :—

> The medicinal use of hemlock is traceable to the remotest antiquity. It is this plant, according to Ehrhart, contrary to the opinion of Haller, it is true, which Hippocrates, Dioscorides and Galenus, designate by the name of *Koneion.* Aretæus, and other physicians after him, have recommended its use externally to depress the *sexual instinct.* Plinius attributes to it the property of curing *pains, tumors, abscesses,* and *ulcers of a bad character.* Avicennæ and Serapion proposed a plaster of hemlock, to scatter *tumors of the breasts and testicles,* and to *prevent a too copious secretion of milk.*
>
> In the fifteenth century, several practitioners, among whom, Ehrhart mentions Ettmueller, Paré, Ray and Lemery, recommended hemlock, externally, for

glandular swellings, indurated, schirrous or carcinomatous tumors, lupiæ and visceral obstructions. Reneaulme, a physician of Blois, employed it internally for scirrhous *enlargements of the liver, spleen* and *pancreas.* Jean Wier lauded it, internally, for *scald-head, tetters* and *suppressed itch.*

In spite of these authors, and several others, among whom, Sprengel mentions H. de Heers, Nathlauw, etc., Con. macul. had fallen into complete disuse, until Stœrck restored it in the latter half of the past century to great celebrity.

Guided by the suggestions of the authors whom we have named, and particularly by the remarks of Wier, Stœrck first tried conium externally. He applied it to the affected part in bags, having previously dipped them for a moment in warm water or milk, to soften them ; and he assures us that, by this means, he succeeded in arresting gangrene, quieting the pains of gouty patients, suffering arthritic nodosities (in a man of 60 years,) alleviating the most inveterate rheumatisms, and finally, in scattering scrofulous tumors, glandular indurations of the mammæ, and curing even the most malignant cancers. Encouraged by these successful results, Stœrck prepared an extract of conium in the same manner that he employed afterwards in making an extract of aconite (see page 490.) He first tried it on a little dog, then on himself ; and having assured himself that this drug was not so deleterious that it might not be taken without danger in small quantities, he made it into pills and gave them, in progressive doses, to such of his patients as seemed to require them. Stœrck asserts that by this means, he cured 1st, a *schirrus of the parotid gland,* against which all the dissolvents, even corrosive sublimate, had been used without any success ; 2d, two cases of *cancerous ulceration* of the right breast, with hardness of the axillary and inguinal glands ; 3rd, two cases of *schirrus* of the right breast, one of which changed to an abscess during the treatment, but healed nevertheless ; 4th, an unyielding, hard tumor of the breast, coming on six weeks after confinement ; 5th, a case of *cancer,* extending from the corner of the mouth to the ear (in a man who, after having got much better, had not patience enough to persevere in the treatment, and died under the hands of an empirical quack ;) 6th, a *tumor* of the breast caused by a contusion ; 7th, an *enormous induration* of the left breast, red, livid, etc., with short breathing and dry cough (in the case of a lady who, when almost well, drank wine and died of an apoplectic fit in consequence) ; 8th, open *schirrrus* of the neck, with profuse secretion of fetid ichor ; 9th, two *schirri* of the sublingual glands, in the same individual ; 10th, a case of *cancer* of the left breast, extending from the border of the lower jaw to the abdomen (in a female who, when on the point of recovering, according to all appearances, *exposed herself to a draught of air,* (sic !) and was taken with acute pain in the bowels and a diarrhœa that nothing could stop, in consequence of which she died) ; 11th, *schirrous glands* at the neck, in the axillæ, groins, and likewise an *ulcerated schirrus* of the left breast ; discharging an acrid, corrosive ichor ; 12th, a case of *schirrous induration and ulceration* of the sublingual and cervical glands, accompanied with a schirrous tumor on the clavicle, which was so hard that it was supposed to be cartilage ; 13th, a recent *schirrus* of the breast ; 14th, a case of *schirrous induration* of the left testicle, accompanied by three *carcinomatous excrescences* on the penis and an enormous swelling of this organ, (the cure was completed with mercury) ; 15th, two *fistulous ulcers* of the neck, running to the tongue, sternum, between the œsophagus and the wind-pipe, to the xiphoid cartilage and the lumbar-vertebræ, in a female of 32 years (cured in three weeks by the combined use of the conium pills, and fomentations of conium) ; 16th, a *schirrous induration (?) of the liver,* accompanied with icterus ; 17th, several *abdominal tumors,* consequent on paroxysms of quartan fever ; 18th, two cases of compound cataract ; 19th, *scrofulous swellings* (to which Stœrck adds the adjective *schirrous,*) and a scrofulous ulcer on the left thigh, in the case of a female of 25 years.

In the two memoirs which Stœrck published after this first pamphlet (from 1761 to 1765) we find a considerable number of cases of a different nature from those to which the conium was first applied ; such as, 1st, *schirrous tubercles* in the vagina, with acrid leucorrhœa ; 2d, an *horrible ulcer* on the face, that had resisted all known means until then ; 3d, a case of acrid, corrosive leucorrhœa of ten years' standing, with sleeplessness and hardness near the anus ; 4th, a case of *tetter,* with itching, stinging heat, and discharge of an acrid serum ; 5th, a case of *asthma*, with cough, anguish, dyspnœa, etc.; 6th, a case of general *scurvy ;* 7th, two cases of *cataract :* 8th, two cases of *amaurosis,* one of one, the other of four years' standing ; 9th, two cases of *amenorrhœa,* with intermittent pulse, vertigo, etc.; 10th, a case of *epilepsy,* the paroxysms coming on every five or six weeks.

The celebrated de Hæn was one of Stœrck's most vehement opponents. This writer says that he administered conium to upwards of one hundred and twenty women afflicted with cancer, but without any success. His testimony, however, is rather suspicious, owing to his bitter opposition to Stœrck. Whereas Stœrck's disciples, Ehrhart, Collin and others, were perhaps guilty of silently passing over their reverses, de Hæn, governed by petty rancor, took care to publish his own to the world.

Be this as it may, if conium had violent opponents, it had, on the other hand, zealous partizans, among whom we may mention Locher, Fred. Hoffmann, Collin, Cullen, Quarin, Ehrhart, Decotes, Marteau, Vincent, Dupuy de la Porcherie, Gase, Hufeland, Hallé, Valentin, Bridault, Lespine, Récamier, etc. This shows that the number of those who have used conium after the manner of Stœrck, is quite considerable. I have read the reports of some three or four hundred cases, and I have no doubt there are many more ; but most of them are so vaguely stated that it is difficult to derive from them a clear knowledge of the true pathological conditions for which conium is the appropriate remedy. In the following diseases conium has at times been found useful, at others inefficacious, without, however, the cause of its efficacy or failures having been enquired into ; *cancerous and scrofulous affections, various tumors,* (most generally at the neck, breasts, in the axillæ, groins, hypogastrium, at the feet) ; *obstructions ; ulcers that were not cancerous,* (in the face, on the thigh, etc.); affections that were *considered syphilitic* (which I deem unfounded) ; *tetters ; fevers ; pulmonary phthisis ; asthma ; leucorrhœa ; scurvy ; cataract* (contusions of the eye-ball) ; *ophthalmia,* termed *serous ; hemeralopia ; amaurosis ; dropsy ; amenorrhœa : epilepsy* ; *rickets ; piles ; nasal polypus ; vomiting ; various kinds of neuralgia ; deafness ; gout ; chronic cystitis* with strangury. Latterly some allœopathic physicians have tried conium for *influenza* and *whooping-cough,* and pretend to have made successful cures in both diseases, which is very probable.

The physicians of the School of Paris, consider conium a *stupefying* drug, the Rasorians place it among their *lymphatico-glandular hyposthenisants.*

Following in the wake of the New School, some of the distinguished members of the Old have recently made valuable researches into the physiological action of this drug and arrived at most important conclusions. Harley among others deserves the most honorable mention, as his investigations were conducted not on animals alone, but upon man as well. He thus sums up the conclusions to which his experiments lead him : —

" Conium then in a state of health and in the fullest medicinal doses that we can venture to give, exerts its power chiefly, if not exclusively, upon the motor centres within the cranium. And of these the *corpora striata* of course are the parts principally affected. This appears to be indicated by the extreme rapidity with which the paralysing influence radiates through the body. So sudden and powerful is its action in full doses, that the patient, if he be standing at the time of its accession, has scarcely time to throw out the arms and lay hold upon some support to prevent himself from falling. And in lesser doses the sudden depression of muscular power is such that the patient lets the child she is carrying in her arms, or the heavy object she is holding in her hand, fall to the ground. Again many patients experience when the action of hemlock is at its height, a dull aching pain across the eyebrows, over the roofs of the orbits, and at the back of the eyeballs; sensations manifestly referable to the corpus striatum itself.

"Excepting then the reflex action of the cord, the whole motor function of an individual under the full influence of conium is actually asleep; and this is the simplest view that we can take of the physiological action of hemlock. It is to the corpora striata, to the smaller centres of motion, and to the whole of the motor tract, precisely what opium is to the brain of a person readily influenced by its hypnotic action; and just as opium tranquilises and refreshes the over-excited and weary brain, so does conium soothe and strengthen the unduly excited and exhausted centres of motor activity."—*Old Vegetable Neurotics*, pp 11, 12.

From a consideration of its physiological action Harley has been led to use and found it useful in (1) undue excitement of the motor centres at or near the time of dentition; (2) epilepsy; (3) convulsive action of the muscles; (4) chorea; (5) paralysis agitans; (6) nocturnal cramps of the limbs; (7) tetanus; (8) spasmodic affections resulting from derangement of the vagus nerve, such as spasm of the œsophagus, spasmodic contractions of of the stomach, spasmodic cough, laryngismus stridulus, pertussis; asthma; (9) organic disease or functional diseases of the spinal cord, attended with excessive irritability of the reflex function, in which he includes paraplegia, concussion of the spine; (10) inflammatory diseases of the eye. Dr. Harley has found it useless in dysmenorrhœa, ovarian irritation, and ovarian tumor, in glandular enlargement, and in pure cerebral disease. Though it did not appear to have any effect upon the progress of cancerous diseases it nevertheless acted beneficially by preventing and mitigating pain, by helping the action of opium, and by improving the general health. Others, however, have not been as happy with their trial of Conium in the various diseases and diseased conditions mentioned by Dr. Harley. And the reason, perhaps, is not far to seek. In fact, this must be the case with all antipathic remedies. It is not always, on the contrary, it is indeed seldom that the diseased parts will return to their normal condition, when simply put to sleep or rest. And it is very seldom that they *can* be pnt to sleep by mere so-called sedatives or calmatives unless these succeed in reversing the morbid processes going on in them. Dr. Harley sees the failure of the *contraria contrariis* law to explain in many cases the discrepancies between the physiological and therapeutic actions of conium; he is thus brought as it were face to face with the law of similars, is thrown into perplexity, but wedded to his own school, he utters the following inconsistency:—"At first sight," says he, "we should be apt to regard conium as a depresser of the muscular vigour; but this, I am convinced from repeated observations, would be a very erroneous view of its action; and I am prepared to say that, in repressing and removing irritative excitement of the motor centres, conium is a tonic to these parts of the nervous system, in cases which require its use."

Concordances.

Moral and intellectual faculties.—Anac. *bell.* bry. *calc.* cann. caust. graph. hell. *hyosc. ignat.* laur. LYC. natr. NATR-MUR. n-vom. op. petr. *phosph.* PH-AC. PULS. RHUS. sep. SIL. STRAM. sulph. VERATR.

Seat of the diseases.—Acon. *arn.* ars. aur. BELL. *bry.* CALC. cann. *caust. cham.* CHIN. cocc. euphr. *graph. hep. hyosc. ignat.* kali. LYC. MERC. *natr-mur.* nitr-ac. N-VOM. oleand. op. *petr.* PHOSPH. ph-ac. PULS. *rhus. sabad.* SEP. SIL. spig. *staph. stram.* SULPH. *veratr.*

Morbid states and sensations.—Acon. alum. anac. *arn. ars.* asaf. aur. BELL. *bry.* CALC. *caust.* cham. CHIN. *cocc.* cupr. graph. *ignat.* jod. *kali.* LYC. *merc.* mosch. natr. natr-mur. nitr-ac. N-vom. oleand. op. *phosph.* ph-ac. plat. PULS. *rhus.* SEP. *sil. spig.* spong. stann. staph. stram. stront. SULPH. veratr.

Glands.—*Ars.* BELL. bry. carb-an. cham. clem. hep. lyc. nitr-ac. PHOSPH. puls. *rhus.* SEP. sil. spong. SULPH.

Bones.—Asaf. bell. *calc.* lyc. MERC. NITR-AC. PULS. ruta. *sep.* sil. staph. SULPH.

Skin—Arn. ars. bar. *bell. bry.* CALC. carb-veg. caust. clem. dulc. *graph. hep.* kali. lach. *merc.* mezer. nitr-ac. n-vom. petr. phosph. ph-ac. PULS. RHUS. SEP. SIL. staph. stront. SULPH. sulph-ac. viol-tr.

Sleep and dreams—Ant-tart. bell. BRY. CALC. caust. croc. GRAPH. hep. ignat. mgs. merc. *natr.* n-mosch. N-VOM. OP. PHOSPH. *ph-ac.* puls. *sep.* SIL. SULPH.

Pyrosis.—ARS. aur. bell. camph. chin. N-VOM. phosph. puls. RHUS. sep. sulph. veratr.

Time.—*Acon. arn,* aur. croc. *dros.* euphr. *hep.* natr-mur. n-vom. phosph. *rhus.*

Exacerbations.—Acon. arn. ars. *aur.* bar. bell. bry. CALC. CAPS. *carb-veg.* caust. cham. chin. cocc. cycl. *dulc. euphorb.* FERR. graph. hep. ignat. *kali.* LYC. merc. natr. *natr-mur.* N-VOM. PHOSPH. *ph-ac.* plat. PULS. RHUS. sabad. *samb.* SEP. SIL. spig. SULPH. tar. valer. viol-tr.

Concordances in general.—Acon. *arn. ars.* aur. BELL. *bry.* CALC. caps. carb-veg. *caust.* cham. *chin.* cocc. dulc. ferr. *graph. hep.* hyosc. *ignat.* kali. LYC. *merc.* natr. *natr-mur. nitr-ac.* N-VOM. op. petr. PHOSPH. *ph-ac.* PULS. RHUS. sabad. SEP. SIL. spig. staph. stram. SULPH. veratr.

Antidotes.—Coff. nitr-ac. *spir. nitr. dulc.* (vinum.).

Hahnemann's Preface.

Squeeze out the juice of the plant when it has but just begun to blossom, and mix 2 drops of it with 100 drops of Alcohol, preparing the dilutions in the known fashion, or else mix two grains of the recent leaves with sugar of milk and then form the potencies by trituration and subsequent succussion.

The great medicinal powers of this plant may be inferred from what has been written by Stœrck and his followers on the brilliant results obtained by means of *Conium,* in the years 1770, 1771, etc. However, although some good results were obtained, at least in the beginning, in the treatment of some horrible diseases, yet, on the other hand, the repeated use of excessive doses of this drug has done irreparable injury and has destroyed a number of human lives.

The apparently contradictory statements of honest observers based upon their respective experience, some of which had a tendency to gladden, others to sadden the heart, have been recently reconciled by Homœopathy : It has shown that it is impossible to obtain beneficial effects from the use of heroic remedies by employing large and repeated doses of a comparatively unknown and powerful drug in the treatment of equally unknown diseases, "but that the drug ought first to be proved upon healthy persons and ought to be exhibited in the highest potencies in diseases to the symptoms of which its own pathogenetic effects are "homœopathic."

Such homœopathic doses are indeed strange contrasts of the doses which have been employed by allœopathic physicians, 140 grains of the extract, or a wine-glass full of the recent juice, even 6 times a day. The true Homœopathist has the advantage of never using this drug to the prejudice of his patient.

Those terrifying examples have prevented me from investigating the effects of that drug until lately; then it was that I discovered its anti-psoric qualities.

This remedy, in order to act beneficially, has frequently to be preceded by some other drugs, and must then be used in the smallest doses.

Excessive effects of the drug may be alleviated by smelling of the sweet spirits of nitre, or, in some cases, by drinking some coffee.

This drug, when homœopathically indicated, has been most advantageously used in the following affections, even in single attacks thereof: Sadness; hypochondria; anxiety; dejection of spirits and melancholy; discouragement; irritability; frightfulness; disposition to feel vexed; *want of disposition to work;* forgetfulness and weakness of the head; vertigo, when looking round, as if the patient would fall to one side; heaviness of the head; attacks of tearing headache which oblige one to lie down; stitches in the top of the head; chronic and stitching headache; *falling off of the hair of the head;* itching below the eyes and smarting, burning, when rubbing them; feeling of coldness in the eyes, when walking in the open air; stye on the eyelid; short-sightedness, long-sightedness; dark points and coloured bands before the eyes; in the room the eyes are dazzled by the light of day; stitches in the ear when walking in the open air; tearing and stitches in and about the ears; drawing stitches in the ear from within outwards; induration of the swollen parotid, accumulation of cerumen; *roaring in the ears,* humming, buzzing, and *tingling in the ears;* discharge of pus from the nose; itching in the face; itching pimples in the face; herpes in the face; gnawing ulcers in the face; *heat in the face;* dryness and peeling off of the lips; drawing pain in sound teeth when walking in the open air; stitching pain in the teeth; involuntary swallowing, scraping in the throat; hawking up; fulness in the pit of the neck with suppressed eructations; *frequent and empty eructations the whole day;* loud eructations tasting of the ingesta; heart-burn rising in the throat; ravenous hunger; the bread will not go down, it does not taste well; burning in the œsophagus and pharynx after a meal; nausea of pregnant women; acidity of the stomach; stitches in the left hypochondrium; fulness in the abdomen, early in the morning when waking up; oppressive contraction of the epigastrium; writhing and grinding (searching) in the umbilical region; sore feeling in the abdomen when walking on stone-pavent; incarceration of flatulence; rumbling and grunting in the abdomen; colic during emission of flatulence; *constipation, with unsuccessful desire for stool;* hard stool, every-other day; diarrhœa; stool streaked with blood; when emitting the urine the flow suddenly stops, and continues again in a short while; pressure upon the bladder as if the urine would come out immediately; white, turbid, *thick urine*, *cutting in the urethra, when emitting the urine;* impotence and want of erections; insufficient erection, which lasts only a short while; feeble embrace; weakness after an embrace, *uterine spasms*, uterine spasms, a grinding pain is felt above the pudendum, the abdomen becomes inflated, the chest is then affected and stitches are felt in the left side, pinching and griping in the uterus; bearing-down and stitches in the vagina; stitches in the labia pudendi; *itching of the pudendum* and inside; menses are too weak, bearing down during the menses and drawing in the thigh; leucorrhœa; smarting, excoriating leucorrhœa.

Excessive sneezing, obstruction of the nostrils, obstruction of the nose in the morning; obstruction of the nose which has lasted for years, troublesome feeling of dryness in the nose; *cough,* especially in scrofulous patients; shortness of breath when walking; asthma, in the morning when waking up; *asthma in the morning*, stitches in the sternum; jerks in the chest; pressure and compression above the hips, tightness in the nape of the neck; soreness in the lower cervical vertebræ; the shoulders feel sore as if they had been pressed upon too much; sweat of the palms of the hands; drawing pain in the hips; lassitude in the knees; cramp of the calves; *coldness of the feet* and hands; liability of the feet to catch cold, uneasiness (impatience) in the lower limbs, itching of the skin, frequent, red, itching spots upon the body; brown spots upon the body; nettle-rash from violent bodily exercise; old, humid tetters; impatience, especially in the lower limbs; paroxysms of hysteria and hypochondria from abstinence of sexual intercourse, in unmarried men; attack: a stinging is perceived as coming from the stomach and extending under the left ribs and as far as the back; stitches in different parts of the whole body, *physical depression and other symptoms from a walk in the open air*, sudden exhaustion when walking; the limbs feel bruised; painfulness of the skin; faintishness in the whole body, lassitude early in the morning when in bed; sick feeling in all the limbs, as if they were excessively tired; drowsiness by day; drowsiness in the evening with contractive closing of the eyelids; one falls asleep late, when in bed; sleep full of fancies; number of nightly dreams; unrefreshing sleep; nightly pains.

This drug has been proved by Drs. S. Hahnemann, Franz, Gross, Langhammer, Rummel, Visliconus.

Analogous Remedies :—

1. Dig., Dulc., Iod., Lyc., Merc., Nitr. ac., Nux v., Puls. 2. Arn., Asafætida, Bell, Coff., Graph., Mang., Mer., Mosch., Mur. magn., Phosph., Phosph. ac., Plumb., Rhus., Rut., Sabad., Sep., Staph., Sulph., Sulph. ac., Tar., Val. 3. Aeth., Calc., Cic, Fer., Nux mosch., Op., Phell., Sassap., Zinc.

*Pathogenetic Symptoms.**

Mind :—

. Rather sad.
. She is easily moved to tears by trifles.
. Hypochondria, depression of spirits and indifference, when walking in the open air.
. Hysteric fit with chilliness and a kind of spasmodic movements.
5. Hysteric anxiousness.
. Anxiousness.
. Anxiousness in the scrobiculus cordis,
. He was sunk in deep reverie, was full of apprehension about the present and the future, and sought solitude.
. Dread of men when they approached him, and nevertheless dread of being alone.
10. The neighbourhood and conversation of those who pass him, is very offensive to him ; he feels an inclination to lay hold of them and to abuse them.
. Superstitious thoughts.
. Fearful, whining and desponding:
. Fear of thieves.
. One imagines that some one has entered the door at night.
15. Inclination to start as with fright.
. Frequent thoughts of death.
. Sadness (1 d.).
. Low-spirited, every afternoon, as if some great guilt oppressed him, accompanied by a sense as of paralysis in all the limbs, indifferent.
. Extremely disagreeable and anxious thoughts after a meal early in the morning, with obtusion of the forehead, (after 29 h.).
20. Out of humour ; he knows not how to employ himself and pass his time, (after 8 h.).
. Peevish ; every thing around him made a disagreeable impression upon him.
. Great dissatisfaction.
. Trifles vex him and put him out of humour.
. One constantly feels vexed and out of humour.
25. He remembers past vexations.
. One easily feels vexed and angry.
. Indifference.
. Want of sympathy.
. Absence of pleasant feelings.
30. Want of disposition to work.
. Cheerful mind and desire to talk, (curative effect).
. Bright and open mood, (after 3, 4 d. curative effect).
. Cheerful and full of energy, early in the morning, (curative effect in 24 h.).

Sensorium :—

. Want of memory.

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* Symptoms marked H. are taken from Harley : *The Old Vegetable Neurotics.*

35. Loss of memory.
. Inability to recollect things when waking up from the siesta.
. Excessive difficulty to recollect things.
. When talking he is at a loss how to express himself and to recollect things.
. He frequently chooses wrong expressions in speaking.
40. Dulness; one finds it difficult to comprehend that which one reads.
. Dulness; a kind of stupefaction; he finds it difficult to understand that which he reads.
. Dulness of the mind, after drinking.
. Dulness of all the senses.
. Insensibility and indolence.
45. He walks about as if he were half asleep.
. Full of fancies early in the morning (after 24 h.).
. Hurriedness.
. Confused thought.
. Delirium.
50. Dementia.
. Obtusion of the head, (after 1 h.).
. Obtusion of the left side of the head as if caused by cold, or as if the brain did not fill up the whole of the skull.
. Constant obtusion of the forehead, in the region of the eyebrows and the root of the nose, (the first days.).
. Obtusion and heaviness of the head, when waking up from a sound sleep.
55. Obtusion and heaviness of the head, (after 5 d.).
. Heaviness of the head.
. Sensation of heaviness in the back part of the head, which comes and goes, is sometimes felt when stooping while sitting, and constantly passes off when raising the head.
. Dizziness and whirling sensation in the head, lasting two days.
. Dizziness when walking.
60. Intoxication.
. Intoxication when taking the least liquor.
. Even water and wine affected his head.
. Continued stupefaction of the head, with constant inclination to slumber.
. Vacillation of the body.
65. Vertigo, as if he were turning in a circle, when rising from his seat.
. Vertigo, when stooping and raising the head again, as if the head would burst.
. Vertigo, worst when lying down, as if the bed were turning in a circle.
. Vertigo, early in the morning, when rising from the bed.
. Vertigo, when going down stairs; she has to hold on to something, and, for a moment, she knew not where she was.
70. Vertigo, affecting the head.
. Vertigo, as if every-thing appeared to go round.

Head :—

. Headache, a simple pain, when walking in the open air; dulness of the mind; also in the morning until breakfast.

. Headache, when setting the foot upon the ground; her head is affected by every step she makes.

. Headache every day, caused by too small, although frequent stools, with tenesmus.

75. Headache, with nausea and vomiting of mucus (3 d.).

. Violent headache with vertigo; she suffers with it for three, four days, being sad, taciturn, and sitting at one place.

. Stupefying headache in the outer part of the forehead.

. Headache in the morning when waking up, as in epidemic fevers, as if the brain were torn, especially towards the occiput (after 10 h.).

. Headache, early in the morning, as if the head had been bruised by blows, or would fall to pieces.

80. Semi-lateral, gradually increasing headache, as if the head were bruised, and as if some kind of load were pressing downwards in the head; this sensation is increased by moving the eyes towards the affected side.

. Headache, as if the head were too full and would burst, in the morning, when waking.

. Sensation in the right half of the brain, as if a large, foreign body were in it.

. Dull pressure in the head, when walking in the open air; he had to rub his forehead.

. Aching in the right half of the brain, towards the back part.

85. Pressure in both temples, after some hours.

. Aching above the eyes, extending from within outwards.

. Aching, as if a stone were pressing on the upper part of the frontal bone, (3 d.).

. Tightness in the head, as if both temples were being compressed, after every meal; he has to lean his forehead upon the stable.

. Headache, as if the integuments of the upper part of the frontal bone were drawn together; the headache passed off when stooping and laying one's own hand on that part; it is accompanied by chilliness, vertigo, and an inability to recollect things; this latter symptom puts one out of humour, (after 1 hour and a half.).

90. Drawing pain in the brain, behind the middle of the forehead (the first day.).

. Drawing in the head, the brain having gone to sleep; this symptom abates after a meal.

. Drawing pain in the temples, when touching the parts.

. Tearing in the right temple and the right ear.

. Tearing headache in the occiput and nape of the neck, especially, however, in the orbits, constantly accompanied by nausea, she had to go to bed.

95. Tearing pain through the temples, early in the morning (4 d.).

. Tearing headache in the region of the temples, with pressure in the forehead, after a meal (3 d.).
. Tearing pain in the temples, during a meal.
. Drawing pain in the temporal bones.
. Slow tearing, on the left side of the occiput, when walking (after half an h.).
100. Tearing stitches extending from the left parietal bone down to the frontal region.
. Lancinations in the forehead.
. Lancination, darting through the forehead, from within outwards, early in the morning after rising.
. Headache, with stitches darting through the forehead from within outwards, with inclination to go to bed, in the forenoon.
. Painful lancination, darting through the forehead, from within outwards, at noon.
105. Lancinating headache in the forehead, the whole day; however she was not obliged to lie down.
. Pricking pain in the head, lasting at least one hour.
. Stitches in the parietal bones and in the forehead, with vertigo, so that he was obliged to sit down on his walk; accompanied by stitches in the muscles of the nape of the neck.
. Pain in the occiput, at every pulsation, as if that part of the head were being pierced with a knife.
. Throbbing in the forehead.
110. Griping and a heavy fulness alternately felt in various places of the sensation seems to come from the stomach; at the same time the brain is so sensitive that it is painfully shaken by only a slight noise, or by the conversation of others.
. When shaking the head, one feels a headache from the brow to the occiput, as if something had become detached.
. At every step, when walking, a noise in the vertex as of the breaking of a finger-nail; not when sitting.
. Heat in the head.

Scalp:—
. Sense of numbness and coldness on one side of the head.
115. Aching in the outer parts of the forehead.
. Sharp pressure at a small place of the integuments of the head.
. Drawing pain in the forehead, over the eyebrows.
. A good deal of itching in the hairy scalp.
. Eruption of several pimples above the forehead, one of which increases to the size of a hazel-nut within a fortnight, its size being painful to the touch (after 24 h.).
120. Falling off of the hair.

Eyes:—
. Pain of the orbits especially when the head aches.
. Aching pain across the eyebrows. H.
. Pressure in the eyes especially when reading.
. Pressure in the external canthus as of a stye.
125. Pressue in the eyes as of a stye, especially in the forenoon,

with inflammation and redness of the eye, attended with smarting lachrymation.

. Painful pressure in her eyes, while closing them in the evening when on the point of falling asleep.

. Drawing pain and redness of the eyes.

. Stitches in the internal canthus, with agglutination of the lids in that part of the eye, early in the morning.

. Itching stinging in the inner canthi, which cannot be removed by friction, (after 1 h. and a half.).

130. Itching all around the left eye.

. Itching of the margin of the eyelids.

. Smarting pain in the inner canthus, as if some corroding substance had got into the eye, accompanied by lachrymation.

. Heat in the eyes.

. A heat which is almost burning, moves rapidly through the eye in the forenoon and evening.

135. Burning in the eyes.

. Burning on the inner surface of the eyelids.

. Burning in the eyes, towards evening, with pressure in the orbits.

. Redness of the eyes.

. Inflamed eyelids with incipient formation of styes at some places ; the boy's eyelids frequently wink.

140. Yellowish colour of the eyes (19 d.).

. Faint appearance of the eyes.

. Eye-gum, early in the morning.

. Twitching of the upper eyelid.

. Tremulous look, as if the eye were trembling.

145. Movement of the eyes as if they would be pressed out.

. Protruding eyes.

. Difficult opening of the eyelids, early in the morning ; they become closed by being drawn towards each other.

. He could hardly raise the eyelid, which seemed pressed down with a heavy weight ; and he was disposed to fall off to sleep. H.

. Her eyelids were closed, and when requested, she was quite unable to separate their margins, though she tried perseveringly to do so. H.

150. Upper eyelids (in a horse) swollen and drooping, so as to nearly cover the eyes (paralysis of the levator palpebræ and orbicularis). H.

. Dilatation of the pupils (after 1 h.). [Dilatation of the pupils occurs usually after only very large doses and then it is often but slight, and only observable in a subdued light—the excitement of strong light overcoming the tendency to dilate, just as the exertion of a strong will strengthens for a time an enfeebled limb.—Harley.]

. Contraction of the pupils, (curative effect—after 3 h. and a quarter.).

. Weakness of sight.

. Obscuration of sight.
155. Blindness immediately after waking from a sleep in the hot sun.
. Short blindness in the afternoon; the child complains of headache and pain in the eyes, after which loses his power of vision; this loss occasionally recurs again at later periods.
. Obscuration of sight, when walking in the open air; the sight is clearer in a room.
. Vision good for fixed objects; but, when an uneven object was put in motion before the eyes there was a haze and dimness of vision, producing a feeling of giddiness. H.
. On raising his eyes from the object upon which they had been fixed to a more distant one, the vision was confused, and a feeling of giddiness suddenly came over him. H.
160. So long as the eyes were fixed upon a given object, the giddiness disappeared, and the defintiion and capacity of vision for the minutest objects were unimpaired. But instantly the eyes were directed to another object, all was haze and confusion. H.
. Far-sightedness (in a short-sighted person); he was able to distinguish distant objects pretty clearly (after 3 h. and a half).
. More short-sighted than formerly; he was only able to recognise near objects (after 29 h.).
. He saw things double and threefold, with nothing but arches before his eyes.
. Something resembling a thread seems to float before his right eye.
165. Clouds and light spots are before one's eyes.
. When closing his eyes, at night, he sees fiery zigzag-shaped lines crossing each other.
. Things look red.
. When looking at some writing closely, the lines appear to move up and down.
. Fiery sparks before his eyes, when walking in the open air.
170. Increased irritability of the eye, (the first days).
. (The eyes are dazzled by the light of day.)
. (Photophobia, particularly in scrofulous subjects, with pale redness of the eyeball, or partial congestion of the conjunctiva.)
. (Chronic interstitial keratitis, with permanent spasm of the *m. Orbicularis.*) H.
. (Dark points and colored streaks in the room.)

Ears:—
175. Pain in the ear, as if the internal ear were forced asunder.
. Sudden, sharp pressure in the ear, a sort of acute, straining pain.
. Pain in the external ear, which is partly drawing, partly tearing.
. Drawing in the interior of the left ear.
. Stitches in both ears.

180. Stitches behind both ears, especially in the mastoid process, succeeded by a dull pain in the same parts.
. Pinching stitches in the ear, when drinking.
. Sharp shocks (thrust) darting through the ear from within outwards, especially when swallowing something, then they are more violent (after three-quarters of an h.).
. Throbbing of the blood in the ears.
. Violent itching in the external ear.
185. Painful tightness of the skin behind the ears and about the mastoid process; even when in a state of rest (after 1 h. and a half.).
. Blood-red cerumen.
. Painful sensitiveness of the sense of hearing, causing one to start when a noise is made.
. Intolerance of noise and a longing desire for peace and rest (first days).
. Every sound causes him to start with fright.
190. When blowing her nose, her ears feel as if they were stopped by something.
. Shrill tingling in the ear.
. Humming in the right ear.
. Roaring as of the wind in the left ear, with hard hearing, increased during a meal.
. Roaring in the ears as of a violent wind, especially after dinner until the moment when one goes to bed, also during a mental exertion while sitting, mostly however when lying in the bed; also at night when waking up.
195. Noise in front of the right ear, as of a water-fall (after 14 h.).
. Noise in the ears as if the blood were flowing through the brains like a noisy stream.
. Roaring and humming in the right ear.
. Roaring and humming in both ears.

Nose :—

. Jerking in the nose.
200. Momentary jerking in the root of the nose.
. Frequent itching about the nose (after 2 d.).
. Creeping in the dorsum of the nose (after 1 h. and a half).
. Itching tingling in the tip of the nose, and the nostrils.
. A stinging itching in the right half of the nose, as if caused by a foreign body.
205. Burning of the nostrils.
. Stinging soreness in the septum, when pressing upon it, as if there were a pimple.
. A pustule in the depression on the outer side of the right wing.
. Hæmorrhage from the nose.
. Frequent bleeding from the nose.
210. Bleeding from the nose, when sneezing.
. Excessively acute smell.
. A kind of smell as of tar in the back part of the nose; he

imagines he tastes tar.
. (Inflammation of the nose after abuse of Mercury.)
. (Purulent discharge from the nose.)

Face :—

215. Heat in the face,—with congestion of blood to the head and a sensation in the nose as if one had a cold (after 4 h.).
. Sickly and pale complexion (after 7 d.).
. Great paleness of the face, early in the morning.
. Blue face.
. Bluish, swollen face.
220. Swelling of the face.
. Swelling of the zygoma and upper gums, with a tight pain (3 d.).
. Prosopalgia, at night.
. Aching in the bones above the right eye, near the nose and in the zygoma, late in the evening, lasting about ten minutes.
. Lancinating pain in the face, close in front of the ear, in the cheek, in the evening.
225. Fine stitch through the right cheek, towards the corner of the mouth.
. Continued stinging itching in the right cheek, and right side of the face, which only goes off by repeated scratching.
. Itching and gnawing in the forehead, which only goes off for a short while by friction.
. Soreness, as from excoriation, in the skin of the face, after washing and then wiping the face.
. Pimple upon an old hepatic spot of the cheek.
230. Eruption of a pimple on the forehead, with a tight and drawing pain (4 d.).
. A pimple upon the forehead, with a tight pain; when touching it and even after, one experiences a tearing sensation all around (after 2, 3 d.).
. Tremor of the lower lip.
. Itching of the upper lip (after half an h.).
. Vesicles on the upper lip, near the vermilion border; they cause a pain as if the parts had become excoriated.
235. Ulcers on the lips, after a fever.
. Fine stitches in the chin, shooting upwards through the jaw.

Jaws and Teeth :—

. Drawing, extending from the jaw to the ear and head; not painful, shortly after drinking.
. Violent itching around the chin.
. Spasm of the jaws.
240. Gnashing of teeth.
. Toothache, (after tearing ?) towards the ear, eye and malar bone, only during a meal.
. Toothache.
. Drawing in a hollow tooth, when eating something cold, not when taking a cold drink; the pain extends even through the temples (after 3 h.).

. Drawing pain, extending from the lower teeth of the right side to the zygoma.
245. Drawing and boring in the left molar tooth.
. Boring prickings between the sockets of the left side, when moving the lower jaw.
. Jerkings and gnawing in the teeth.
. Pain in the teeth, during mastication, as if they were loose.
. Looseness of the molar teeth. as if they would fall out.
250. The gums are affected with a burning pain.
. Swollen, blue-red gums, as if ecchymosed.
. Bleeding of the gums in the region of the molar teeth.
. The gums readily bleed.

Mouth and Pharynx :—

. Pain in the tongue.
255. Stiff, swollen, painful tongue.
. Heavy speech.
. Speechless.
. Dryness of the mouth.
. Dryness of the mouth, with a sour taste in it.
260. Dry tongue.
. Ptyalism. Violent ptyalism.
. Frequent hawking up of mucus.
. Sore throat, a sore pain when swallowing (2 d.).
. Spasms in the fauces.
265. Difficult deglutition.
. Impeded deglutition.
. She is frequently obliged to swallow when walking in the wind.

Taste and Appetite :—

. Putrid taste in the mouth, when eating or swallowing.
. Acidity of the stomach, with a flat and somewhat putrid taste in the mouth.
270. The taste in the mouth is somewhat acid.
. Bitter and sour taste, after breakfast.
. Bitterness of the mouth and throat.
. Bitterness in the throat.
. The taste in the throat is sometimes bitter, without any apparent cause.
275. Decreasing appetite (the first 4 days).
. Loss of appetite.
. Complete loss of appetite, and great weakness of the stomach.
. The appetite for food and smoking is diminished immediately.
. Thirst.
280. A good deal of thirst, every afternoon.
. Violent thirst, the whole day (after 74 h.).
. Great desire for coffee.
. A good deal of appetite for sour things.
. Great desire for salt and salt food.

Gastric Symptoms :—

285. Rapid inflation of the abdomen, when taking a little milk.
. Distension of the epigastrium after a meal, with pressure in

the stomach, and subsequent arrest (interception) of breathing.
. Stomach-ache after eating early in the morning, with great fulness of the stomach and chest the whole day.
. A quantity of flatulence immediately after a meal, it passes off with noise, after which one feels relieved.
. Nausea and sensation of satiety after a meal.
290. Nausea and inclination to vomit after every meal.
. Nausea after dinner, with oppressive headache in the lower part of the occiput, in the vertex and forehead.
. Hiccough in the beginning of the supper.
. Pain in the umbilical region after supper, as if all the bowels were bruised by blows.
. Drawing pain in the umbilical region, shortly after a meal.
295. Drawing pain in the abdomen after dinner, when sitting.
. After having eaten something, a kind of slight heat seems to come from the stomach, and extend through the arms down to the fingers, after which the hands turn pale and become dead.
. Chilliness towards the termination of the supper.
. Oppressed breathing and hard pressure on the sternum, after a meal.
. Sweat, when eating or drinking.
300. Great exhaustion, and great relaxation of the abdominal muscles after breakfast.
. Great weakness and depression of strength after breakfast.
. Acidity in the mouth after a meal.
. Sour eructations after a meal.
. Gulping up of sour substances from the stomach, after a meal.
305. After a meal her whole mouth is filled with sour water.
. Suppressed eructations after breakfast.
. Frequent eructations.
. Unsuccessful eructations with consequent pain in the stomach.
. Frequent and empty eructations, especially early in the morning.
310. Eructations, especially towards evening.
. A good deal of empty eructations, without either taste or smell.
. Sour eructations, in the evening.
. Sour eructations, with burning in the stomach.
. Putrid eructations.
315. Eructations tasting of the ingesta.
. Eructations tasting of the ingesta, even 6 hours after a meal.
. Erectations tasting of the ingesta, without any disposition to vomit, accompanied by gulping up of things from the stomach.
. Regurgitation of some food from the stomach during eructations.
. Heartburn, in the evening.
320. Acrid heartburn.
. Hiccough.

. Frequent nausea, and complete loss of appetite.

. Nausea in the evening, with great exhaustion, so that talking was fatiguing to her.

. Nausea in the morning, which passes off after stool.

325. Nausea and disposition to vomit.

. Inclination to vomit, with eructations and exhaustion.

. Inclination to vomit aiter a meal with subsequent hiccough, with good taste and appetite.

. Frequent vomiting, with complete loss of appetite.

. Violent vomiting.

330. Vomiting of mucus in the afternoon, with headache, nausea and subsepuently frequent eructations.

Stomach :—

. Frequent distension of the stomach by flatulence.

. Inflation of the stomach.

. Pressure in the scrobiculus cordis, as if there were a fulness, intermixed with stitches and increased by motion and inspiration.

. Pressure rising from the pit of the stomach as far as the œsophagus, as if a round body would rise.

335. A pressure in the pit of the stomach, as if something were moving round in it; afterwards some stitches in the side of the chest, also early in the morning.

. Drawing pain from the pit of the stomach to the fauces, with short and difficult breathing, early in the morning, after rising and also after stool.

. Contractive pain in the stomach, with a feeling of coldness in the stomach and coldness in the back; it roused her from sleep early in the morning.

. Spasmodic pains in the stomach.

. Spasm of the stomach.

340. Spasmodic pinching in the stomach.

. Pinching in the stomach with consequent contraction of the chest, accompanied by a sensation in the back as if it were grasped into one heap, and by many eructations; this pain rouses her from her sleep.

. Pinching in the stomach, which afterwards affects the intestines in a similar but dull manner.

. Stitches in the region of the stomach, towards evening.

. Fine stitches in the region of the heart.

345. Sore and raw feeling in the stomach.

. Sore feeling in the pit of the stomach, as if there were subcutaneous ulceration, early in the morning, when lying in bed and turning to the other side, three mornings in succession (after 13 d.).

. Oppression (tightness) of the pit of the stomach, when leaning backwards, with arrest (interception) of breathing, and suppression of speech.

Abdomen :—

. Painful tightness in the hypochondria as if something (a ribbon)

had been drawn round very tightly.
. Aching in the liver, when walking.
350. Aching in the right side of the abdomen and chest, increased by breathing.
. Straining sensation in the right side of the abdomen, during a deep inspiration.
. Sharp drawing in the anterior lobe of the liver.
. Sharp drawing jerks under the right ribs.
. Painful tearing in the region of the liver.
355. Painful stitches in the region of the liver, in paroxysms (after 16 h.).
. Stitches in the region of the stomach.
. Stitch in the region of the stomach, arresting the breathing.
. Tight aching in the left hypochondrium, extending as far as the side of the abdomen.
. Stitch in the left side of the abdomen (2 d.).
360. Painful stitch in the left hypochondrium, early in the morning, when lying in bed, accompanied by oppression of breathing; this pain passes off when raising one's self.
. Searching (grinding) lancinations in the left side of the abdomen
. Pain above the hips, when walking.
. Pain in the abdomen, when laughing.
. Violent pains in the abdomen, with chilliness.
365. Pressure in the abdomen, with subsequent fermentation.
. Continued pressure in the abdomen, as of a load, between the meals.
. Hardness and violent inflation of the abdomen, in the evening, after a meal; protrusion of the umbilicus; this disturbed her sleep.
. Inflation of the abdomen, after dinner.
. Inflation and fulness of the abdomen, in the afternoon.
370. Distension of the abdomen, and a contractive sensation in the direction of the chest with jerks, accompanied by aching and pinching, for some minutes, (2 d.).
. Inflation of the abdomen, like flatulent colic, in the evening, together with coldness of one foot.
. Swelling of the abdomen.
. Swelling of the mesenteric glands.
. Contracted place in the colon.
375. Oppression of the abdomen.
. Contractive pain in the abdomen, resembling after-pains; this pain causes tenesmus.
. Griping and pressure in the abdomen.
. Spasm in the abdomen (6 d.).
. Most violent colic.
380. Pinching colic, but neither immediately preceding, nor succeeding stool.
. Pinching in the hypogastrium, after every meal, with a good appetite.
. Violent pinching in the abdomen, as if diarrhœa would set in.

. Cutting colic, early in the morning, after a chilliness of two hours with headache and nausea.
. Lancinations in the left side of the abdomen, as if a tumor would form.
385. Cutting colic with diarrhœa (12 d.).
. Cutting colic in the middle of the abdomen, with good appetite, and night-sleep.
. Violent lancinations in the abdomen, every day, especially in in the right side.
. Lancinations in the abdomen, as if knives were plunged into it (4 d.).
. Shooting pains in the abdomen (8 d.).
390. Lancinations in the epigastrium, early in the morning, when waking up, worse during motion.
. Drawing sensation in the abdomen, after drinking.
. Drawing colic, when walking, (after 3 h.).
. Drawing pain in the umbilical rigion, early in the morning after rising.
. Drawing in the hypogastrium and pressure in the direction of the epigastrium, early in the morning, when sitting.
395. Drawing pain in the intestines, as if they were bruised (after. 9 h. and a half.)
. Tearing in the hypogastrium, above the pudendum, extending as far as the abdominal ring.
. Dull tearing at a small place close below the umbilicus.
. Sore kind of tearing, in paroxysms, extending from the region of the stomach as far as the side of the abdomen, as if every thing were being torn out of the abdomen; for several mornings.
. A few pushes against the abdominal muscles, as from a fœtus.
400. Itching in the abdomen.
. Fine pinching in the abdominal muscles adove the umbilicus, when bending the body over.
. Sharp stitches in the abdominal muscles below the umbilicus, on the left side, shooting from below upwards.
. Stitches in the groin when rising from a seat.
. Pain in the right groin, as if it were swollen; with a sensation of subcutaneous ulceration when touching the parts.
405. Pains as if the hernial sac would protrude (2 d.).
. Pressing in the direction of a former inguinal hernia, without any protrusion of the hernial sac.
. Tearing in the mons veneris, when sitting.
. Rumbling and grunting in the abdomen.
. Gurgling in the left side of the abdomen.
410. The flatus pass off immediately and with ease.
. Emission of a quantity of flatulence (after 18 h.).
. Emission of fetid flatulence.
. Violent emission of a quantity of flatulence.
. Emission of cold flatulence.
415. Cutting pain in the abdomen, previous to the emission of flatu-

lence.
. (Writhing and digging in the abdomen.)
. (Pain as from soreness in the abdomen, when walking on stone pavement.)

Stool :—

. Constipation.
. Frequent tenesmus without any stool.
420. Constant tenesmus, without any stool.
. Hard stool every 2 days, with tenesmus.
. Scanty stool.
. Stool every 2 days, the first part being accompanied by tenesmus.
. Frequent tenesmus every day, only a little stool being expelled at a time.
425. Constant tenesmus ; he has, however, only two evacuations a day, the discharge being very thin.
. Frequent tenemus ; only a little soft stool, however, is passed, after which the inflation of the abdomen increases.
. Violent tenesmus every day, with diarrhœa occurring three times.
. Papescent stools, a few every day, with burning at the rectum.
. Liquid stool, mixed with hard fragments ; the expulsion being accompanied by the emission of noisy flatulence , colic (7. d.).
430. Four liquid stools with hard little lumps (6 d).
. Diarrhœa.
. Exhausting diarrhœa.
. Frequent diarrhœa, like water, with a number of empty eructations and copious emission of urine (after 24 h.).
. Frequent diarrhœa, like water, mixed with undigested substances, with pinching in the stomach, which extends through the abdomen (4 d.).
435. Undigested stool (9 d.).
. Undigested substances are passed with the stool.
. One passes the stool while asleep, without knowing it (2 d.).
. Discharge of fetid mucus with the stool.
. Discharge of blood with stool, early in the morning.
440. Every evacuation is preceded by a short cutting pain in the abdomen.
. Burning at the rectum, during stool.
. Emission of a quantity of flatulence during stool, with tenesmus of the rectum and a cutting pain.
. Chilliness during every stool.
. Palpitation of the heart after stool, the beats of the heart being occasionally suppressed.
445. Tremulous weakness after every stool ; it passes off in the open air.
. Pressing in the direction of the anus and the small of the back, in frequent paroxysms (the first days).
. Drawing in the direction of the anus.
. Frequent stitches in the anus, between the sto[illegible] (5 d).

. Itching of the anus.
450. Itching of the rectum, succeeding an itching in the chest and abdomen.
. Heat in the anus.
. Heat in the lower part of the rectum (not in the anus).
. Burning at the rectum and anus.

Urinary Organs :—

. Ischury.
455. Strangury.
. Urgent desire to urinate, every half hour, only a little urine being emitted at a time.
. Frequent micturition, the urine cannot be retained.
. Diabetes.
. Diabetes, accompanied by great pain.
460. Frequent micturition at night (after 10 h.).
. He has to urinate at two o'clock in the morning, several nights in succession.
. Wetting the bed, at night.
. Red urine.
. Hæmaturia.
465. Frequent hæmaturia with asthma.
. (The urine is thick, white, and turbid, with frequent urging.)
. Great pains in the urethra, while emitting a urine which is constantly mixed with a tough, turbid mucus.
. Cutting in the urethra, while emitting the urine.
. Cutting in the external orifice of the urethra, while urinating (the first days).
470. Cutting drawing through the urethra while urinating.
. Pressure upon the uterus, and cutting in the urethra, while urinating.
. Burning when urinating.
. Burning in the urethra when urinating (11 d.).
. Burning in the urethra, immediately after urinating, early in the morning, for half an hour.
475. Pressing as of the urine, with a smarting sensation, after micturition (after half an h.).
. Crampy pressure, shortly after micturition, in the region of the neck of the bladder, from without inwards, with sharp stitches, continuing for many hours, more violent when walking than when sitting.
. Sharp pressure in the bladder.
. Violent stitch in the urethra, extending as far as the internal orifice.
. Shooting stitches in the back part of the urethra.
480. Burning in the urethra.
. Discharge of mucus from the male urethra, also after micturition (4, 5, 6 d.).

Male Genital Organs :—

. Discharge of pus from the urethra, after previous itching in the same.

. Tearing, through the penis, between the acts of urinating (4 d.).

. Itching of the penis, the prepuce and the glans; rubbing does not remove it.

485. Inflammation of the prepuce.

. Cutting pain in the glans.

. Pain in the testes, lasting several hours, especially after erections (the first days).

. Aching in the left testicle, for several hours.

. Drawing pain in the left testicle.

490. Pinching and tearing in the testicles, in the evening (4 d.).

. Pain as if one were cutting with a knife through the middle of the scrotum, between the testicles up to beyond the root of the penis, in frequent and short paroxysms.

. (Swelling of the testicles, particularly after contusion.)

. Sweat of the perinæum.

. The sexual desire is entirely wanting during the first days, in spite of the most exciting allurements.

495. Painful erection, in the evening, previous to falling asleep.

. Excessive sexual desire.

. Lasciviousness (after 12 h.).

. (Insufficient erections during an embrace.)

. (Languor after an embrace.)

500. Pollutions three nights in succession, with subsequent excitement of the sexual desire.

. Pollution (during the first night).

: Even when merely playing with women, he has an involuntary emission of semen.

. Discharge of the prostatic juice while expelling the fæces.

. Discharge of the prostatic juice during every emotion, without any lascivious thoughts (with itching of the prepuce).

Female Genital Organs:—

505. Violent itching of the pudendum, also of the vagina, greatest immediately after the menses; she has to rub herself; this is succeeded by a pressing downwards of the uterus.

. Violent itching of the posterior and interior parts of the vagina.

. Severe stitches of the pudendum.

. Cutting between the labia, during micturition.

. Large pimple on the mons veneris, painful to the touch.

510. Suppression of the menses.

. Suppression of the menses after they have scarcely made their appearance; this is followed by a drawing pain extending down the back as far as the small of the back, day and night.

. The menses delay 7 days.

. Appearance of the menses on the 17th day.

. Brownish blood appears instead of the menses (after 31 d.).

515. Dry heat in the whole body previous to the appearance of the menses, without any thirst.

. Anxious dreams previous to the appearance of the menses.

. Heaviness in all the limbs previous to the appearance of the menses, accompanied by a whining mood, uneasiness, and anxious care about every trifle.

. Stitches in the region of the liver previous to the appearance of the menses, mostly at night, when lying down, and especially when breathing (after 23 d.).

. Contractive pain in the abdomen after the appearance of the menses; it passed off when walking in the open air.

520. Leucorrhœa (2 d.).

. Violent leucorrhœa, succeeded by hoarseness, cough, and expectoration.

. Discharge of a white, acrid mucus from the vagina, causing a burning sensation.

. Thickish, milk-coloured leucorrhœa, with contractive, labor-like colic from both sides of the abdomen.

. Bloody mucus, instead of the leucorrhœa, for 10 days.

525. Leucorrhœa, 10 days after the menses, lasting for some days, the discharge being preceded by a good deal of colic.

. Leucorrhœa with weakness and paralytic feeling in the small of the back previous to the discharge, with subsequent lassitude.

. Pinching in the abdomen previous to the leucorrhœal discharge.

Cold, and Catarrh :—

. A taste as if one had a cold, extending from the posterior nares as far as the mouth.

. Frequent sneezing, without coryza.

530. Frequent sneezing, copious discharge of the nasal mucus, several days, as if one had a cold.

. Mere water dropping out of the nose.

. When blowing the nose a watery fluid came out of it.

. Violent catarrhal fever with inflammation of the throat and loss of appetite.

. Hoarseness.

535. Dryness of the chest.

. Sensation of fulness in the chest; inability to hawk up any thing by coughing; coughing produces stitches in the sternum.

. Rattling in the chest, in the evening, when lying down, with much cough when sitting up again.

. A dry little place in the larynx, where one experiences a titillation inducing a dry and almost constant cough.

. Itching in the throat, with titillation causing a short, hacking cough.

540. Scraping and tingling in the chest in the direction of the larynx, inducing a dry, almost continual cough.

. Cough as if caused by a tingling in the centre of the sternum, with and without expectoration.

. The cough is easily excited by sour and salt things (without expectoration).

. Cough as soon as he lies down, by day or in the evening; he has to rise until the cough ceases.

, Cough increasing when lying down, consisting of a number of single fits in the beginning, as if one would vomit.

545. Continued, violent cough in the evening, before going to bed.
. Nightly cough.
. Short, convulsive cough, excited by a deep inspiration.
. Violent cough.
. Hooping-cough and asthma.
550. Nightly hooping-cough.
. Hooping-cough with discharge of a bloody mucus from the chest.
. Excessively violent cough, which confines him to his bed.
. Dry cough with hoarseness.
. Dry, short, and hacking cough.
555. Loose cough, without her being able to throw up.
. Cough, in consequence of which the tightness of the chest is relieved, but nothing is thrown off; afterwards something is thrown off during a slight cough; accompanied by coryza.
. Yellowish expectoration when coughing; it tastes like rotten
. Discharge of pus from the chest.
. His head is affected in consequence of the cough.
560. Stitches in the head when coughing.
. When coughing the child complains of stomach-ache.
. Pain in both sides of the abdomen when coughing.

Chest :—

. Stitches in the left mamma when coughing, for three hours; they rouse her from sleep, and then her sleep remains disturbed.
. He finds it difficult to breathe, especially to take an inspiration, as if his chest did not expand sufficiently (after 4 h.).
565. Difficult breathing.
. Difficult breathing and violent pain in the chest.
. Difficult, slow inspirations, in the evening when in bed.
. Short breathing, both when at rest and in motion (7 d.).
. Short, panting breath.
570. Asthma. Frequent asthma.
. Frequent oppression in the upper and right half of the chest, with a sensation as if it were caused by accumulation of flatulence.
. Suffocating fit, as if the throat were clogged with mucus.
. Suffocating fits, as if the upper part of the throat were clogged.
. Violent pain in the chest.
575. Violent pain in the chest, with violent cough.
. Pain in the sternum, as if it were pressed in.
. Tightness across the chest, with pressure in it when taking an inspiration.
. Aching in the sternum, the whole day, with alternately tearing and lancinating pain around the mammæ and nipples with frequent oppression and shortness of breathing (4 d.).
. Aching in the sternum, early in the morning, with aggravated breathing, when standing (3 d.).

580. Occasional pressure in the region of the heart, as if the heart would be pressed down, with oppressed breathing (3 d.).
. Cutting pressure in both sides of the chest, increased by inspiration (after 14 h.).
. Fine stitches and pressure on both sides of the chest, greatest when leaning forward upon something.
. Dull stitch above the heart when taking a deep inspiration; shortly afterwards during every motion of the body.
. Pleuritic stitches.
585. Violent stitches in the side, as if a knife were being plunged into the side, causing loud moaning.
. Fine prickings in the left side of the chest. when walking in the open air.
. Beating stitch, with pain, in the upper and left part of the chest, rather towards the centre of the chest.
. Drawing and tearing through the whole chest, in the evening when in bed, lying on one side with oppressed breathing, and a hard pressure on the upper part of the sternum; this pressure arrests the breathing (during an inspiration) (3 d.).
. Tearing in the chest.
590. Crampy tearing in the right side of the chest.
. Pain as from bruises in front of the chest, and in the back.
. Pain as from bruises (on the inner surface) of the sternum.
. Stiffness of the sternum, when taking exercise.
. Itching in the interior of the chest.
595. Burning in the region of the sternum.
. Violent palpitation of the heart, after drinking.
. Palpitation of the heart, when rising from bed.
. Frequent and visible palpitation.
. Frequent shocks against the heart.
600. Stinging itching over the whole exterior portion of the chest, going off only for a short while by scratching (after 1 h.).
. Pimples upon the chest, painful to the touch.
. Cancer of the sternum.
. Pain in the mammæ.
. Aggreeable, but violent itching of both nipples (after 4 h.).
605. Itching of both of her breasts; when rubbing, the skin has an appearance of red scales with a burning sensation.
. Hardness of her right mamma, with pain to the touch and stitches in the mammæ at night.
. Inflammation of the scirrhous indurations in the mammæ.

Back:—

. Pain in the small of the back.
. Pain in the small of the back when bending the back backwards.
610. Violent pain in the back after a short walk; afterwards nausea and exhaustion.
. Stitches in the small of the back, with drawing through the lumbar vertebræ when standing (after 3 h.).
. Spasm in the back with considerable pressure and drawing.

. Tight pain in the back.

. Painful tightness of the muscles below the scapulæ, when at rest and considerably augmented by raising the arms.

615. Sharp pressure below the left scapula, during every motion of the arm.

. Drawing in the lumbar vertebræ, when standing (after half an h.).

. Drawing pain in the right scapula.

. Dull stitches between the scapulæ.

. Pain, as from a sprain, in the left side of the back (the first days).

620. Tingling in the spinal column as if it had gone to sleep.

. Hot feeling along the back, in the morning when waking up.

Neck :—

. Straining pain in the nape of the neck, when at rest, with a feeling of dryness in the fauces.

. Drawing in the nape of the neck, when walking in the open air (after 1 h.).

. Throbbing drawing in the nape of the neck at its juncture with the right shoulder (after 8 h.).

625. Itching thrill extending from the nape of the neck towards the head (4 d.).

. Drawing on the right side of the neck from above downwards, reaching as far as the shoulder-joint, when at rest (3 d.).

. Apparent enlargement of the neck.

. Increase of the goitre.

Superior Extremities :—

. Drawing pain in the arm, upwards and downwards, mostly when moving it.

630. Paralytic and drawing pain in the upper arm, when at rest (after one h. and a half).

. Tearing through the upper arm, in the evening when in bed (1 d.).

. Tearings, alternating with stitches, in the upper arm, when at rest, going off only for a short while by motion.

. Tearing pain in the elbow, when walking in the open air.

. Cutting pain in the bend of the left elbow, from within outwards, when at rest (after 50 h.).

635. Heaviness in the elbow-joints, with fine stitches.

. Cracking in the elbow joint, especially in the evening.

. Crampy pain in the muscles of the fore-arm, especially when leaning the arms on something (after half an hour).

. Dull drawing in the fore-arms, more violent when at rest than in motion (after 72 h.).

. Pain as from bruises on the outer side of the left fore-arm, most violent when touching the part (after 62 h.).

640. Itching tingling in the fore-arm, which passes off only for a short while by rubbing (after 1 h.).

. Paralytic drawing pain in the wrist-joint, when at rest.

. Fine stitches in the wrist-joints (after 10 m.).

. Stitching pain, as from a sprain, in the joint of the metacarpal bone of the left thumb with the carpus, especially when bending it inwards.

. Cracking in the wrist-joint, especially in the evening.

645. Deadness of the left hand, especially in the palm of the hand.

. Sensitiveness of the skin on the dorsum of the hand (the first days).

Sweaty hands.

The fingers become spasmodically rigid when cutting with the scissors.

. Sharp drawing in one or the other finger.

650. Sharp stitches in the metacarpal joints of the fingers, when at rest (after 1 h. and a half).

. . Prickings under the finger-nails (5 d.).

. Cutting shocks (thrusts) in the posterior articulation of the thumb (after 48 h.).

. Numbness of the fingers.

. Itching in the dorsa of the fingers.

655. Burning pain in the inferior side of the bend of the index-finger; afterwards a hard, long-continuing tumor made its appearance at this place.

. Yellow spots on the fingers (after 5 d.).

. Yellow finger-nails (after 6 d.).

. Panaris with inflammation and throbbing, burning pain as from subcutaneous ulceration.

Inferior Extremities:—

. Excessive itching between the nates.

660. When rising from one's seat the ischiatic bones are very painful, not while sitting.

. Long, deep stitch in the region of the insertion of the gluteus maximus (after 3 h. and a half).

. The right hip is painful in the evening, and, when walking, it feels sprained.

. Dull stitches in the region of the hip, near the trochanter, when sitting; they do not hinder walking (after one quarter of an h.).

. Sensation as of humming and groaning in the lower limbs.

665. Drawing and tearing in the left limb, accompanied with great uneasiness; she was unable to hold her limb still for one minute.

. When sitting the limbs go to sleep.

. Swelling of the thighs.

. Cramp-pain in the anterior muscles of the right thigh, when walking in the open air (after 13 h.).

. . Weak feeling in the right thigh when walking, even unto trembling.

670. Sensation on the posterior surface of the thigh, as of the talons of a bird being thrust in.

. Dull drawing in the right thigh, when at rest, relieved by motion (after 1 h. and a half).

. Dull tearing, in the anterior surface of both thighs, when walking.
. Prickings in the muscles of the left thigh, when sitting.
. Dull pain in the knee, when stepping upon the foot.
675. Dull pain in the left knee, when stepping upon the foot.
. Arthritic pain in the knee, the whole day (after 15 d.).
. Tearing pain around the knee-joint.
. Tearing around the patella, when sitting.
. Stitches in the external ham-string, when walking in the open air.
680. Pain as from a bruise in the left knee, or as if the patella were broken, so violent that one would scream aloud, when walking or standing in the open air; when exerting oneself in the open air, one experiences an anxious heat over the whole body.
. Pain in the right knee as if it were sprained.
. Paralytic pain in the bend of the knee, as if there were water in the joint.
. Pain, as from fatigue, around the knee, for half an hour.
. Cracking of the knee (of the patella ?) when sitting straight.
685. A clucking pressure upon the tibia, when extending the limb, while sitting.
. Jerking and uneasiness in the legs, at night, with shuddering after every attack.
. Tight and painful stiffness in the calves.
. Drawing on the inner side of the left calf and in the dorsum of the right foot.
. Tearing in the surface of the tibia, in the evening when in bed (1 d.).
690. Tearing, beginning on the inner side of the foot, and rising along the leg, in the open air.
. Dull tearing extending upwards along the leg and beginning at the external malleolus, in the open air.
. Crampy tearing in the tibiæ, when walking in the open air.
. Pain in the tibia as if it had been bruised by blows.
. Twelve days previous to the proving he injured his leg which became painful all the way down, the place of the injury now became blue, spotted, and, at the slightest movement, it pained as if a knife were being plunged into it; when walking, or when touching the part, it felt as if it were bruised.
695. Dull pain in the tarsus.
. Tearing in the tarsus, from noon till evening, worse when sitting, than when walking.
. Burning and throbbing stitches in the bend of the foot.
. Tearing in the dorsum of the foot, in the evening when in bed.
. Tearing in the soles of the feet when walking.
700. Sharp drawing under the heel.
. Stitches in both the malleoli of the right foot, first fine stitches, afterwards sharp, for 2 days, and rousing him from his sleep at night; they finally extend up to the calf; when sitting

the stitches are slower, when walking, they are more frequent and violent.

. Tingling pain in the soles of the feet, when stepping upon the feet; when walking, one experiences stitches in the feet.

. Numbness and insensibility of the feet.

. Tremor of the feet, early in the morning when rising.

705. Intensely painful burning pain under the heel, when stepping upon the foot, with redness and swelling of the part.

. Swelling of the whole foot, affected with a burning pain.

. Painful swelling of the feet; it does not pass off while one is sleeping.

. Violent itching and an itching pimple on the soles of the feet.

. Pustule on the feet.

710. The tips of the toes are painful as if there were subcutaneous ulceration.

. Pulsative stitches in the small toe, it is even painful when walking.

. Tearing in the ball of the big toe, early in the morning, when standing or sitting.

. Burning tearing in the posterior joint of the big toe, when waking up from sleep, while lying down.

. Burning pain under the toes, when sitting.

715. Excites the podagra.

Sleep:—

. Frequent yawning as if he had not slept enough.

. Sleepy and tired, early in the morning when waking up, the first two hours.

. Sleepy early in the morning when rising.

. One feels as if one had not slept enough, early in the morning.

720. At the time when he ought to wake up as usually, he is unable to rouse himself and feels overwhelmed with sleep for some time to come.

. An aching in the humeri and femora forces him to sleep early in the morning.

. Drowsiness by day, without one being able to sleep.

. Drowsiness by day; he is unable to keep himself awake when reading (after 3, 8 h.).

. Somnolence.

725. Somnolence, even when walking in the open air.

. Somnolence the whole day, with great weakness, even unto falling.

. Torpor, in the afternoon; in spite of all his efforts to the contrary, he had to lie down and to sleep.

. Great drowsiness in the evening and want of disposition to do anything.

. One falls asleep late, after midnight.

730. Sleeplessness.

. Sleeplessness on account of heat and uneasiness; he tosses about in his bed.

. Sleep, which is bordering upon stupor, after which the headache, which had been scarcely perceptible before, becomes more violent.

. Calm sleep, especially in the morning; it is very sound and lasts longer than usually, (this is partially a curative effect?)

. Half waking up from a sound sleep with anxiety.

735. Interrupted sleep.

. Premature waking up in the morning.

. Pulsation in the right side of the head, in the evening when in bed.

. Headache with nausea, at night when in bed.

. Boring pain in the tongue, at night (2 nights).

740. Spasm of the stomach, between one and two o'clock at night, resembling a griping and a drawing together.

. Scraping in the throat, at night, with a cough.

. Bleeding from the nose, at night, with vertigo early in the morning, when rising.

. He felt so much vexed at night, that he fell asleep, after which he had convulsion in the arms and hands while asleep; his eyes opened, stared, rolled to and fro.

. When asleep he extends his arms from under the cover.

745. At night, when in bed, he feels too hot; he has to rise and to spend the night on the sofa.

. About midnight he wakes up and is then drenched with sweat.

. At night, he experiences a violent itching about the oriffice of the rectum, in the nates, the perinæum, and on the sides of the scrotum, which frequently obliged him to rise.

. In the evening, when in bed, he experiences a tearing at times in one, at times in another limb.

. Violent weeping at night, when asleep, with a flow of tears.

750. He grumbles, at night, when asleep.

. At night she feels an anxiety which rouses her from sleep and prevented her for a long time from falling asleep again.

. Night-mare, at night.

. After midnight, when only half awake, one is assailed with fearful thoughts, which increase to such a height that they even cause a deadly anguish.

. Sleep is frequently interrupted by bad dreams (the first days).

755. Anxious, frightful dreams which can be well recollected.

. Anxious, repulsive dreams.

. Anxious, vivid dreams.

. Anxious dreams full of threatening danger.

. A number of intimidating dreams, at night and towards morning.

760. Intimidating thoughts, at night, after waking up.

. Frightful dreams.

. Dreams about lamentable diseases.

. Dreams about bodily mutilations.

. A number of dreams about dead persons and about living ones whom one imagines are dead.

765. Shameful dream.

. Dreams full of vexation and fighting.
. Vivid, voluptuous dreams.
. Confused dreams during an uneasy sleep.

Fever :—

. Shuddering, (immediately.)
770. Shuddering during motion.
. Shuddering over the whole body.
. Shuddering, lasting one hour and a half, for several hours in succession, at eight o'clock.
. Occasional shuddering over the whole body, followed by a quick pulse with heat and thirst.
. Shuddering and coldness in the afternoon; in five or six hours after, a thrill of glowing heat in all the limbs, the obtusion of the head and the indifferent sadness disappearing at the same time and giving place to the keenest sympathy (after 7, 8 h.).
775. Coldness and chilliness early in the morning, with a feeling of giddiness and constriction in the brain, and indifference and despondency.
. Chilliness in the morning, for two hours, with headache and nausea (3 d.).
. Chilliness with tremor of all the limbs, which obliges her to be in the sun all the time.
. Chilliness, with cold hands and a hot countenance, accompanied by nausea.
. Chilliness, in the afternoon, from three to five o'clock.
780. An internal chilliness rouses him from sleep at about five o'clock in the morning, (almost without thirst,) with cold hands and soles of the feet, and with a hot countenance, for eight hours; this is followed by an increase of heat in the face, and by lassitude (after 20 h.).
. Feeling of heat in the whole body, the greater warmth of the skin being also perceived by contact, with dry, viscous lips without any thirst, even with aversion to beverage and an insipid saliva in the mouth; he is affected by noise and light objects, likewise by every motion; he wants to sit alone with closed eyes.
. Thrill of warmth, in the afternoon, without any thirst.
. Internal heat, especially in the face, with redness of the face, without any thirst.
. Feeling of internal and external heat, after sleep.
785. Constant heat.
. Excessive heat.
. Acute (fatal) fever.
. Violent, feverish heat, with profuse sweat and great thirst, with want of appetite, diarrhœa and vomiting.
. Quotidian fever.
790. Severe attacks of fever.
. Slow fever with complete loss of appetite.
. Perspiration.

. Sweat all over especially on the forehead, with redness of the face and whole body, without any particular heat.

. Violent sweat in the evening when sitting, with heat in his countenance, some sweat in the beginning of the sleep, when opening her eyes; even by day, when slumbering on her seat.

795. The child wishes to go to bed early in the evening; it is then very hot, drenched with sweat, sleep uneasy, violent tremor, and short, railing and moaning breathing.

. Perspiration of the lower limbs, at night.

. Night-sweat.

. Sweat about midnight.

. Profuse sweat in the afternoon.

800. Slight sweat over the whole body, early in the morning, when waking up from sleep.

. Inclination to sweat, even of the cold limbs, during and after waking up.

. Local, fetid, smarting sweat.

. The pulsations are perceptible throughout the whole body.

. Quick pulse.

805. Unequal pulse, as regards strength and rapidity.

. Large, slow pulse; it is interrupted by a few smaller pulsations, coming on without any regularity.

. Slow, weak uulse.

. Collapse of pulse.

Skin:—

. The skin of the body appears to him hotter than it is.

810. Itching of the limbs.

. Itching of the thighs and arms.

. Erratic and evanescent itching of all the parts of the body.

. Corrosive itching, commencing with a stitch, in the evening when in bed, only on the right half of the body especially when lying upon it, with uneasiness in all the limbs, easily relieved by scratching, but constantly reappearing in some other place.

. Stinging sensation over the whole body.

815. Itching sensation as of flea-bites, closely succeeding each other in different places of the whole body, but single bites, never two at the same time.

. Slow, itching-smarting, burning stitches in different places of the body.

. Inflammation of the skin all over the body; it is painfully burning.

. Fine, scarcely visible eruption in the face, on the back, and the remainder of the body, itching, like a tingling thrill under the skin.

. White, transparent pimples, filled with an acrid humor which form scabs resembling those of the itch; accompanied by local, fetid, smarting sweat.

820. A place, which had been injured years ago, is frequently painful.

. Increased, intolerable pains in the affected parts.
. Cough excites a pain in the ulcer.
. Increased pain in the ulcer.
. Tight pain in the ulcer.
825. Bleeding of the ulcers.
. The edges of the ulcer become black, with effusion of a fetid ichor.
. Fetid ichor from the ulcer.
. Gangrene of one portion of the ulcer.
. Petechiæ.
830. Blueness of the whole body.
. Drawing pain in an old wart on the upper lip.
. Concealed cancer of the bones, in the middle of the long bones.
. The glands became painful in the evening.
. Tingling and agreeable itching in the glands.
835. Stitches in the glandular swelling.
. Stinging pain around the glandular swelling, as if the parts were excoriated.

General Symptoms, Weakness, Paralysis, Fits :—

. Clawing sensation around the bones of the upper and lower limbs; this causes a faintness.
. Crampy and spasmodic pains in various parts, chest, jaws, etc.
. Pulsative jerking in the abdomen and small of the back.
840. A kind of stiffness of the body; the movement of the limbs, the nape of the neck, etc., excites a disagreeable sensation.
. Tearing through different parts of the body (4 d.).
. Tearing in all the limbs, as if they were sprained.
. Erratic tearing in the upper and lower limbs, as well as in the teeth (first days).
. Tearing stitches, of an erratic nature; they seem to pierce the part through to the bone.
845. Burning sensation on the tongue and in the hands.
. Sensation in all the joints as if they were bruised, when at rest; little or none during motion.
. Violent pain as from bruises, in all the limbs.
. Pain in the joints as if they were fatigued.
. Parts become easily strained by lifting.
850. The limbs go to sleep.
. Numbness and coldness of the fingers and toes.
. The pains mostly occur during rest; rarely, by way of counter-action, during motion.
. The worst pains come on at night, and rouse him from sleep.
. Walking in the open air is fatiguing to her: the open air exhausts her.
855. Headache with pressure on the right eye when returning from a walk in the open air.
. Itching in the pit of the stomach when walking.
. Continued want of animal heat, and constant chilliness.
. Little quantity of animal heat, after the siesta, and chilliness.
. Sensation as if there were a want of animal heat with sadness.

860. Great liability to catching cold when sitting, even in the room, after a walk, during which he had been sweating.

. Extreme liability to catching cold.

. Owing to a cold, he wakes up at four o'clock with pain in the head and scapula; when turning his body it feels bruised; during a deep inspiration, the abdominal muscles, in the region of the stomach experience a pain which arrests the breathing.

. Orgasm of the blood.

. Continued and violent orgasm, intermixed with jerkings in the region of the heart.

865. Excited state of the blood in the body.

. Trembling motion and tremor of the whole body, especially violent in the anus (5 d.).

. Tremor of all the limbs.

. Continued tremor.

. Subsultus tendinum.

870. Convulsions.

. Convulsions of the affected part and of the whole body, with danger of suffocation.

. Sick and faint, early in the morning, when in bed, with low spirits, drowsiness, and pain in the stomach (2 d.).

. A wretched feeling in the whole body, early in the morning before breakfast, as after a heavy illness, with want of appetite, and as if one had eaten too much and loathed nourishment.

. Chest, head and hypochondria feel too full, several mornings when waking up.

875. Heaviness and qualmishness in the whole body, in the afternoon.

. Contractive feeling in the interior of the body, the saliva accumulating in the mouth at the same time.

. Sensation, after walking, as if something arrested his steps; nevertheless he walked very fast.

. When alone at home, she felt an inclination to weep, to which she yielded; she then sobbed loudly, with twinkling before the eyes and indistinct sight, so that she had to hold on to something when walking; afterwards depression of strength in all the limbs and dull headache.

. Fits generally after a meal, commencing with gaping, stitches in the sternum and pressure in the pit of the stomach, even when slightly touching the part; afterwards the pain passes to the region of the kidneys, in the back, in the form of stitches.

880. Attack of lassitude and chilliness, which obliges him to lie down, next day he moreover feels a headache and excessive palpitation of the heart; at every pulsation he felt as if the occiput had been pierced with a knife, the heart appearing at times to be strongly beating, at times hurried, at times vacillating.

. Great exhaustion.

. Surprising exhaustion in the whole body, evening and morning.
. Faintishness early in the morning after waking up, as after a fever.
. Faintishness, early in the morning when waking up; it goes off after rising.
985. Depression of both the mind and the body (4 d.).
. General feeling as of being bruised by blows.
. The clothes weigh like a load upon chest and shoulders.
. Weakness of the whole body.
. Failing nervous weakness.
890. Weakness and weight in the lower limbs, especially the knees, as if they would bend; they tremble.
. Weakness when waking up from the siesta; upper and lower limbs feel as if they had been annihilated.
. One feels very much exhausted, faint and as if paralysed after a short walk, with a peevish and hypochondriac mood.
. While returning from a walk, every step he makes is excessively fatiguing to him, and he feels so low-spirited and impatient that he can scarcely await the moment when he shall be able to rest himself in solitude.
. Standing is very troublesome.
895. She feels so weak that she has to lie down.
. He feels so faint and chilly that he has to remain in his bed; accompanied by headache and palpitation of the heart.
. The most robust, and vigorous individuals lost all their strength and had to remain in their beds.
. He is unable to recruit himself in whatever position of the body it may be.
. Loss of all his strength, until death ensues.
900. Laughing mood simultaneous with the want of vitality.
. The depressed condition is accompanied with an inclination to laugh, as if coming from the right hypochondrium and the stomach.
. Fainting fits.
. Consumption.
. Dropsy.
905. Apoplexy.
. Apoplexy with dropsical symptoms.
. Paralysis.
. Putrid dissolution of the humours.

[Peculiarities :—

Remission of complaints in forenoon.
Pred. worse in cold weather.
from cold.
from growing cold.
from cold diet.
out-doors.
from uncovering.
from washing, moistening.
lifting.

Pred. worse when resting on anything.
„ „ when stretching out diseased limb.
„ from bodily exertion.
„ when getting out of bed.
„ when sitting erect.
„ when looking sideways.
„ *when* rising from a seat.
„ after sweat.
„ when sneezing.
„ when descending.
better in warm air.
„ from warmth, warmth of stove.
„ from growing warm.
„ from warm diet.
„ indoors.
„ from wrapping up.
„ when letting diseased limb hang down, or when drawing it up.
„ „ when closing the eyes.
„ „ when stooping and sitting bent forward.
„ „ *after* rising from a seat.
„ „ from pressure.
„ „ when ascending.
„ „ in the sun-shine.
„ „ in bed, from warmth of bed.
„ „ from spirituous liquors.—*Gross's Comparative Materia Medica* by Hering.]

EDITOR'S NOTES.

RECENT RESEARCHES ON DIABETES.

From experiments which Dr. Pavy has been recently carrying on he has found the following circumstances to give rise to the diabetic condition of the urine : —(1) Injection of defibrinated *arterial* blood (by which so much as 15 grs. of sugar to the ounce has been produced). Similar injection of *venous* blood does not produce the slightest trace of sugar in the urine. (2.) Continual inhalation of oxygen, which produces a hyper-oxygenated state of the blood, similarly gives rise to the appearance of sugar in the urine. (3.) Inhalation of the fumes of the common puff-ball (lycoperdon giganteum).

In connection with the production of diabetes from the inhalation of the puff-ball smoke Dr. Richardson draws attention to the fact that immediately after the discovery by him in 1853 of the anæsthetic action of the fumes of burning lycoperdon, these fumes were shown to him by Snow and Herapath, to contain carbonic oxide as their active ingredient. Immediately after Dr. Richardson commenced a series of researches on carbonic oxide from which he observed that it behaved exactly like the fumes of the burning lycoperdon, producing insensibility and a peculiar redness of the arterial blood. And it was also found to produce *diabetes* in dogs. Hence Dr. Richardson infers that the production of diabetic urine from the puff-ball smoke arises from the fact of the presence of carbonic oxide, and not oxygen, in the smoke.

These results are curious and important, and we ought to institute provings with both the carbonic oxide, and the lycoperdon giganteum.

SOME NEW SYMPTOMS OF BAPTISIA.

Dr. E. M. Hale publishes, in the *North American Journal of Homœopathy* for February last, the following symptoms from a recent proving of Baptisia by Dr. E. A. Wallace, who had taken *ten* drops of the $\frac{1}{00}$th (100th ?) dilution at one time, at another *twenty drops*, and at another *thirty drops* :—

HEAD—Severe frontal headache, with severe pressure at the root of the nose.

Head feels very heavy with pain in the occiput, with stiffness and lowness of cervical muscles. Frontal headache, with fullness and tightness of the whole head ; neck stiff and lame. Heavy pain at base of the brain, with lameness and drawing in the cervical muscles.

Burning on the top of the head, with soreness of the scalp.

EYES.—Eyes feel sore and lame on moving them.

THROAT.—Sore throat extending to the posterior nares ; throat feels sore and contracted.

NOSE.—Sneezing, feels as if he had a severe cold with soreness and stiffness all over.

FACE.—Burning and prickling of *left side of face and head.*

GASTRIC.—Pressure at the stomach and belching of large quantities of flatus.

CHEST.—Tightness of the chest, and desire to take a deep inspiration.

Lameness of the muscles of the chest and back, particularly when moving the head.

Oppression of the chest and difficult breathing. Pain through left side of chest.

BACK AND EXTREMITIES.—Painful weariness of the whole left side of the body.

Numbness of the *left hand* and forearm, with prickling.

Pain in the left shoulder and arm, and sharp, darting pains through the fingers.

Numb prickling of hand and arm, involuntary movement.

Pain in the neck, unbearable on moving the head; stiffness and lameness of cervical muscles.

Drawing pains in shoulder and arms, more in the left.

Prickling of the hands and feet, with numbness, more on motion.

***Left* foot and leg prickly, and can move but little.**

Paralysis of whole left side; left hand and arm entirely numb and powerless.

Pain in both hips, with numbness.

Wandering pains in all the limbs, with dizziness; feels sore and stiff all over.

Dr. Hale draws attention to the following points about these provings. (1.) All the symptoms, even the paralysis, appeared within a few hours after taking the drug, and disappeared before the expiration of *twelve hours!* (2.) The appearance, six weeks after, of livid spots all over the body, without any special discomfort. (While it may be doubted if the spots were a result of the proving, there are some peculiarities in the Baptisia, that render it more than possible.) (3.) From the 10 drop dose, he had numbness and prickling; from the 20 drop a *sensation of paralysis,* with numbness and prickling, and finally from the 30 drop, actual but transitory paralysis occurred. He ventures to predict Baptisia "will prove a greater remedy for certain kinds of paralysis than we have thought."

THE GARJAN OIL TREATMENT OF LEPROSY.

The Garjan oil, or Wood-oil, as it is sometimes called, is obtained from the *Dipterocarpus lævis* and other allied species, which grow in abundance in the Andaman Islands. Dr. J. Dougall, Offg. Senior Medical Officer, Port Blair, has drawn attention to the remarkable efficacy of this oil in the treatment of Leprosy. He uses it both internally and externally. At first he used it in combination with cocoanut oil to remove its stickiness and make it fluent. He has now abandoned the cocoanut oil, and uses in its stead lime water, in equal proportions to form an emulsion for internal use, in the proportion of 3 parts of the water to one of oil to form an ointment for external use.

The plan of treatment pursued is simple enough, and is as follows:—The lepers have their ablutions in the morning, in which they use pulverised dry earth as a detergent. They then have their dose of emulsion (ʒiv), and a sufficiently large quantity of the ointment which they are made to rub for full two hours. In the afternoon they have their dose of emulsion and ointment. Under this treatment the ulcers are said to heal, the tubercles to soften and subside, and the anæsthesia to gradually diminish. "The emulsion is not disagreeable to the palate, and at first (in small doses) it had no well-marked influence upon the digestive system, but when the dose was increased to one drachm twice a day it improved the appetite and at the same time acted as a mild laxative." It was found to have also distinct diuretic effects, and in the larger doses (4 drachms now used) it acts as a powerful diuretic and evacuant. It should be remarked that the Garjan oil has succeeded after failure of the Carbolic Acid, and Cashew-nut oil previously in use.

HOMŒOPATHY IN THE TREATMENT OF MALARIOUS FEVERS.

*(Presented to the British Homœopathic Congress, held June 1874.)**

MR. PRESIDENT AND GENTLEMEN—HONORED COLLEAGUES—

I can scarcely thank you sufficiently for the honor you have done me in inviting me to contribute my mite in the shape of a paper on some subject relating to Homœopathy at this your annual gathering for 1874. When I recall to mind the history of these congresses, which I have watched with intense interest, when I recall to mind the great men who had presided and the great men who had contributed papers at these congresses in times past, and when I realize in my mind's eye, (which alone I can do at present, being prevented by a variety of reasons from accepting your president's kind invitation,) when I realize in my mind's eye the meeting of the present congress—presided over by a gentleman of rare accomplishments, to whose noble translations the English-speaking world is indebted for its acquaintance with the thoughts, experiences and reasonings of our illustrious Master,—thoughts, experiences and reasonings which have removed for ever the landmarks of mystic, and laid the foundation of positive medicine; and to whose valuable "Lectures" the world is indebted for one of the soundest expositions of Homœopathy extant :—When I realize in my mind's eye the other gentlemen present, some of whom, like the worthy president, have, by their writings and researches, acquired names which are heard of in every part of the civilized world, and others—the younger band of workers—nobly striving to add to the stock of knowledge and to advance the cause of the greatest truth yet discovered in the domain of medicine :—When I realize in my mind's eye all this, I am humbled in the dust to think that you did not forget to invite an obscure man in an obscure corner of the far East, and to invite such a man to contribute to your intellectual enjoyment. Nor for my own sake, nor even for yours, honorable colleagues, but for the sake of the truth which we all worship and the system that enshrines it, do I hasten to comply with your kind request. Yes, Gentlemen, it is simply to bear witness to the truth and to show that truth when understood has charms for even the meanest intellect, that I have ventured to lay before you this humble contribution of mine, which otherwise would be ridiculous in comparison with the contributions of the other gentlemen.

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* At the request of several of our friends and subscribers we have reproduced this Essay from the *Monthly Homœopathic Review*, in which it was honored with a place.

I have selected for my subject "Homœopathy in the Treatment of Malarious Fevers," for the reason that we have at present in Bengal a deadly epidemic of malarious fever which has been devastating the country for some time past, and does not as yet show any signs of diminution of its virulence, and that this, in common with epidemics in general, has been instrumental in demonstrating, not indeed the utter futility of the old system, but the vast superiority of the new over the old. The limits of this paper will not allow me to dwell at any length on the causation or even on the nature of the disease. The causation is, in spite of the efforts of Government and of private individuals to discover it, still shrouded in the densest obscurity; but the nature of the disease, though mistaken by a few eccentric medical men, is patent to every one who has eyes to see and a modicum of common sense in their heads. Whatever malaria may be, whether a material poison, or a mere influence, whatever its immediate and remote causes, in all which matters there may be and has been the widest divergence of opinion, there is perfect unanimity about its effects on the human system. The fevers, the cachexia, the concomitants and the sequelæ, which come on in its train, are all so marked and characteristic, that even laymen do not fail to recognize their peculiar features, and refer them to their true origin, though the origin of that origin itself it may not be easy to trace.

The grand characteristic of malarious fevers consists in their periodicity—their recurrence after definite periods of lull as it were, of apparent health, at least, of apparent apyrexia. A typical paroxysm of fever consists of three distinct stages, the cold, the hot, and the sweating, which are followed by a period of apyrexia of a few hours or of a day or two, which again is succeeded by another paroxysm of the same character, and so on, for a number of paroxysms constituting an attack, after which there is a longer lull of a few days or even months, to be followed by another series of paroxysms or another attack. In this way attack after attack follows, either gradually diminishing in intensity and duration, which is a rare thing, especially when the patient continues to reside in the malarious locality, or gradually increasing in severity, till the intermissions are mere remissions, and the paroxysms, though less in violence, become more obstinate and more exhausting, in other words, till the intermittent gives way to the remittent type. Sometimes the order of things is reversed, the disease at first appearing as remittent, and afterwards becoming converted into an intermitient form. This is certainly the more favourable course of the two. As a general rule, it is the degree of virulence or concentration of the malarious poison or influence which determines the type of the fever, the more virulent and concentrated the malaria, the greater being the tendency to the remittent variety of the disease. We say as a general rule only, because we have seen cases of the strictly intermittent type in which life has been compromised sometimes in the pre-febrile, sometimes in the post-febrile stage, and this in the course of one or two days only. In these cases the malaria must certainly have been of the most concentrated and virulent form, notwithstanding that the fever was of the intermittent character. These acute cases are of the gravest description. They occur when the epidemic is at its height. In their acuteness, severity, and mortality they resemble cholera.

The varieties of these types of malarious fever are endless, and it is needless in this paper to recount them. I shall just touch upon the concomitants and the sequelæ. It is difficult to say whether the primary action of malaria is upon the blood, and through the blood upon the ganglionic nervous system, or upon the ganglionic nervous system and through it upon the blood-forming organs. Whether the one or the other, the result is the same,—destruction of the red corpuscles of the blood and the arrest of their genesis. I have seen healthy, robust men, with no lack of red blood in their system, blanched after a few days' residence in a malarious district, before even the symptoms of the fever had been quite developed, and long before either the Liver or the Spleen had become enlarged. Simultaneously almost symptoms indicative of derangement of the ganglionic nervous system, especially of that part presiding over the primæ viæ, make their appearance, such as loss of appetite, defective secretion, costive bowels, nausea with or without vomiting, &c. Next in order of sequence is the implication of the animal nervous system, as manifested by extreme nervous and muscular debility; this is probably through the ganglionic nerves controlling the vessels supplying the cerebro-spinal centres. The symptoms of implication of the nervous system, ganglionic and cerebro-spinal, indicate not congestion but exhaustion and defective nutrition from an improperly oxygenated and spanæmic blood. I maintain that primarily there is no congestion of any of the viscera, cephalic, thoracic or abdominal. I maintain also that congestion of the abdominal viscera much more frequently ensues than congestion of the thoracic, which again is much more frequent than congestion of the cephalic.

It is difficult to say, however, which of the abdominal viscera it is which suffers the earliest. If we trust to physical signs alone, apart from vital symptoms, the spleen would appear to suffer first. But attention to the vital symptoms, a right interpretation of all the phenomena of these fevers, leads to a different conclusion. It would thence appear that the mucous membrane of the digestive tract suffers earliest in the order of sequence; the liver next, or simultaneously; and last of all the spleen. The spleen, in fact, appears to me to act as a safety-valve to the disturbed functions of the alimentary mucous membrane and of the liver. I have accordingly always looked upon the early enlargement of the spleen as a salutary sign. And I have almost invariably seen that in these fevers, the gastric and the hepatic derangements continue obstinate, so long as there is no perceptible enlargement of the spleen. The first effects, therefore, of the enlargement of the spleen are to divert the morbid action from the stomach and the liver, and to avert the tendency to vomiting, diarrhœa, and dysentery. Again, the assumption by these fevers of the remittent type seems to me to depend upon the want of an adequate safety-valve action of the spleen. And it is a notorious fact that it is in the intermittent variety of the disease, that this organ is found early and the most frequently enlarged. All that is said here, with reference to the salutary safety-vavle action of the spleen, is of course with reference to the early stages of the disease. The organ, in the course of the disease, may become so enormously enlarged that by its very bulk it will seriously interfere with the functions of the neighbouring and even of remote organs. Thus by its pressure upon the stomach it will interfere with digestion; by its pressure upon the transverse and descending colon it will impede its normal peristalsis and give rise to alternate constipation and diarrhœa; by its pressure upon the liver, especially if the latter be enlarged, it may interfere with its secretion and thus cause jaundice; by its pressure against the diaphragm and through it upon the lung, and the heart it may give rise to a variety of abnormal sensations, pains and stitches, palpitations, breathlessness, &c.

Though functionally the liver suffers earlier than the spleen, it does not become enlarged, as a general rule, till after enlargement of the latter organ, and even then it is not in all cases that it becomes enlarged. The number of cases in which there is both enlargement of the spleen and of the liver is small compared to the number of cases in which there is enlargement of the spleen alone, and the number of cases in which there is enlargement of the liver alone without enlargement of the spleen is much smaller. I cannot state the exact ratio of these cases. On a rough estimate I should think that in about 50 per cent. of cases there is enlarged spleen, in about 25 per cent. there is both enlarged spleen and liver, and in 15 per cent. there is enlarged liver alone, and in about the remaining 10 per cent. there is apparently no organic complication.

Next to enlargement of the spleen and the liver we have dropsy of the general cellular tissue, as well as of the peritoneal cavity. Anasarca is much more frequent than peritoneal dropsy; and both, as a general rule, seem to arise as a direct consequence of the enlarged liver and spleen, and of the impoverished blood. The pressure of the liver upon the vena cava descendens and of the liver and the spleen upon the mesenteric vessels, impede the adequate return of the blood from the lower extremities, and from the intestines, and the blood being poor in red globules and fibrine and more full of water, the necessary consequence of this state of things is the effusion of serum into the cellular tissue and into the peritoneal cavity. The condition of the blood alone has, in many cases, determined the dropsies, without any help from the mechanical pressure of the organs in question. I have had considerable experience of the present epidemic, and had under treatment several cases of dropsy of the general cellular tissue and of the serous cavities, as the sequelæ of malarious fevers, but in no instance could I detect any disease of the kidneys. And although I would not be justified in pronouncing the absence of organic renal disorder as universal in cases of malarious fevers, yet I can assert thus much that, if it is developed at all, it must be of the rarest occurrence. This, I believe, is accounted for by the fact of the entire removal of the kidneys from the influence of circulation in the portal system.

The next sequelæ that I have to notice are disorders of the alimentary canal, chiefly the small and the large intestines, resulting in diarrhœa or dysentery or both. Diarrhœa, as I have said above, may arise from mechanical pressure of the enlarged spleen and liver upon the intestines; but it may arise independently as a consequence of the malarious cachexia. There is often a peculiar form of diarrhœa in which there is invariably aggravation from oleaginous and fatty foods. In these cases that small organ, the pancreas, which does not seem to have received the degree of attention from pathologists and physiologists its importance in the economy of digestion demands, appears to me to be at fault. Its intimate relation to the Portal System would lead us to expect that it must suffer in all cases of malarious fevers and that it does suffer is evidenced by the fact that fatty food is not well borne in these fevers. Dysentery is a rare sequela of malarious fevers, and in my opinion is generally a result of heroic treatment. It may, however, like diarrhœa, arise independently and then it is a most serious complication.

The last sequela that I shall notice is what goes by the name of cancrum oris. This consists in ulceration and sloughing of the mouth. It has its start either in the mucous membrane or skin of the lips or cheeks, whence it gradually invades the neighbouring tissues, finally attacking bone (superior or inferior maxillary), or it may have its start in bone and thence radiate within and without, involving the structures in one wide-spread gangrenous inflammation. This most serious and frightful complication is rarely a phenomenon of the early stages of malarious fevers, and, in fact, it is rarely a phenomenon of genuine malarious fevers, that is, of fevers left to themselves and not much mismanaged. It is, however, not an uncommon attendant of mismanaged cases, even in their early stages, especially of cases under kavirajs or native physicians who pretend to practise after the principles of old Hindu Medicine, and use preparations of mercury extensively in almost all diseases. Cancrum oris may arise in the natural course of malarious fevers from exposure and from the free indulgence in acids and acid fruits ; but my persuasion is that, in the majority of instances, it arises from the abuse of mercury (in massive doses) in these fevers. The very use of mercury in these fevers is, in my opinion, its unpardonable abuse, especially when the spleen has become enlarged and the anæmia is fully developed. The susceptibility to the action of mercury in malarious fevers is fearfully increased, and sometimes a single dose of calomel given with a purgative has brought on dangerous salivation, culminating in cancrum oris.

Such is a rapid sketch of the fevers which, for the last nearly twenty years, have been devastating village after village of the finest and richest province of India. The epidemic, by the unwonted virulence it has manifested by its wholesale invasion of every living soul, by the unprecedented mortality that has followed in its train, by the rapidity and certainty of its progress from village to village, has stirred up the community to its innermost depths, and naturally roused its vigilance towards the capabilities and resources of the Medical Profession. The various systems of treatment which divide the profession are under trial in a grand experiment, and it is both interesting and instructive to note the result of this trial. This is what I intend to lay before you, but before doing so, I would just state for your information what the various systems of treatment are that are struggling for existence and mastery in this country.

Taking them in the chronological order of their existence, we have first of all the indigenous system founded on the Ayurveda or the ancient Hindu medical writings. This is a rude form of allopathy and is characterized by the wildest polypharmacy. The practitioners of the system are invariably Hindus, and are called Kavirajs or Vaidyas. We have next the Arabian system founded upon the writings of Avicenna and other old Arabian authorities. This also is a rude form of allopathy and characterized, equally with the former, by polypharmacy, with this difference that it deals more with food-medicines and less with virulent poisons. The practitioners of this system are called Hakims, and are both Mahometans and Hindus, but chiefly the former. We have thirdly the European allopathic system which has come into vogue since the conquest of India by the British, but which has obtained a secure footing since the establishment of the Calcutta Medical College. Of this system I need not speak any thing to you, as you are too familiar with it. We have last of all the system of Hahnemann, of which the exact date of introduction into India I have not been able to trace, but which, if I may say so without presumption, has begun to command respect, if it may not be said to have yet obtained a secure footing, since the conversion of your humble colleague. Homœopathy has not yet gained many professional votaries in this land. In fact the number is so small that it may be counted on one finger. But it can count non-professional votaries by hundreds and even thousands. And while the interest in the system is being mainly kept up by a few professional devotees and by the Journal published in Calcutta devoted to its cause, it is to some extent also sustained by non-professional practitioners who deserve all praise for this good service in absence or dearth of professional men. I may here mention, in a general way, that the Hindu system is in favour with the orthodox Hindus, the Arabian system with the Mahometans, the European with European and educated classes of the Hindu and Mahometan communities. The Hahnemannian system is just making its way, and is in favour with a few Europeans, a pretty large number of Hindus orthodox and heterodox, and a few Mahometans. It is not a little curious that the Europeans are the most conservative in the matter of treatment, the Hindus the least so. I should think the Hindus have been most unjustly blamed for their stereotyped character. They are, in fact, of all the nations in the world, the most susceptible of reform and progress, if only they are convinced of the genuineness of the reform and the reality of the progress, and they are very open to conviction.

At the time the epidemic first broke out, the European allopathic system, by the fact of its being built upon a number of the most positive and progressive sciences, and even by the progressive character of its therapeutics kept up by the spirit of research, had already asserted its immense superiority over the Hindu and Arabian systems. In no other disease was the utter helplessness of these systems proved than in periodic fevers, in the treatment of which the European allopathic system was looked upon as wielding the wand of the magician. When the epidemic broke out with fevers characterized by periodicity, the eyes of the sufferers and of every body were naturally turned towards this system, and its professors and practitioners fearlessly faced the enemy in full reliance upon their infallible specific, and the result for a time was truly magical, but only for a time. Soon the system was startled out of its dream of infallibility. So long as quinine succeeded in suppressing the fevers, the system was in triumph. But the human organism became accustomed and therefore blunt to the action of the antiperiodic, and the fevers made their wonted appearance, less and less to be influenced by it, till a stage arrived when the exhibition of quinine or bark in any shape became a positive evil, causing aggravation of the fever and bringing on other unpleasant symptoms in its train.

Quinine failing, the system became impotent, and the people could not fail to notice the impotency. The battle, of course, was not given up, as indeed it could not be given up with any decency. A host of drugs was summoned to aid the specific, which of course was never omitted from any prescription, and the dose of which entirely depended upon the fancy or whim of the practitioner. Some would prescribe it in what they are pleased to call small, tonic doses, and some in heroic, sedative, antiperiodic doses. In the one case the dose was a grain or two, or even fractions of a grain; in the other it ranged from 10 to 90 grains. Among the auxiliaries, the mineral acids, iron, strychnine, arsenic, iodide and bromide of potassium played the chief part. Some practitioners would abstain from purgatives. The majority, however, could not do without them. The action of the bowels must be kept up, so as to derive, as they said, from the liver and the spleen. And when diarrhœa was thus produced, astringents were exhausted, with or without opium. When from this procedure the bowels became constipated, purgatives were again had recourse to; and thus the unfortunate sufferers were oscillated from artificial purgation to artificial constipation, till either diarrhœa or dysentery of an inveterate character was established to terminate their miserable existence.

Very few people could escape with their lives, under the above treatment, to have recourse to others, and fewer still could really recover. Grave sequelæ mentioned before would gradually but inevitably make their appearance, each of them threatening to take away the lives of the patients with the certainty of fate. Under these circumstances, it is really lamentable to behold the way in which orthodox physicians conduct themselves in their struggle against the disease. The same medicines are given in all possible combinations and with all possible variations of dose. In addition we have now external applications over the regions of the enlarged or congested viscera,—counter-irritants in the shape of blisters, the tincture or the ointment of iodine, &c.

Some very stupid practitioners do not hesitate to have recourse even to leeches to subdue the so-called inflammations or congestions of the internal organs, which they ignorantly believe are the cause of all the mischief. I have seen cases in which blisters became sloughing sores, and, extending down to the ribs have been the cause of death of the most frightful character. I have seen cases in which the bleeding from leeching has produced hopeless prostration or aggravated hundredfold the already existing cachexia.

Such has been the result of the European allopathic system in the present epidemic, a result which has been summed up by a Government Commission, "appointed to enquire into the causes of the Epidemic, its course, and the best means of checking its further progress," in the following words:—"It must be borne in mind that do what we may, the disease must in all probability run a certain course *which is neither to be accelerated nor retarded by any means within our reach.*" As for the other allopathic systems, Hindu and Mahometan, we have already said that without Peruvian bark and its alkaloid they are utterly helpless, and if the Kavirajs do succeed, it is because of their surreptitious use of these drugs in strange combination with their own strange compounds. So that we can leave them out of consideration altogether in the present comparison. When, therefore, we speak of orthodoxy, or the orthodox system or school, we mean the European allopathic.

What has been the result of the Homœopathic system of therapeutics in the treatment of the present epidemic? At the time the impotency of the orthodox system was discovered by the people, we had, properly speaking, no regular professional practitioner of Homœopathy. But we had a layman of remarkable intelligence, of untiring energies, and of a philanthropic disposition, who had become a convert to the new doctrine, and who endeavoured by the aid of books to master its principles, and apply them in the treatment of cases which had become incurable under the old system, or pronounced incurable by its practitioners. As if under the guidance of Providence, the first patient that presented himself to him was one suffering long from malarious fever and spleen. Babu Rajender Dutt, with no experience of the new system in the dreadful cases of fever of the present epidemic, could think of no other drug to give to the patient in question than quinine. But as the patient saw that he was going to have quinine, said that he had consumed several phials, and would not have any more of it. He would be thankful if the Babu had any thing else to give him. This induced him to study the case with some minuteness, so as to individualize it to the best of his ability, and he prescribed some homœopathic medicine; it was *arsenicum* in the present case; and what was the result? The man returned in three or four days to report that there was no return of the fever which had become his daily troublesome companion for a long, long time. The remedy was repeated, I cannot say, for how many days, but the cure was complete. The fever, and with it the spleen and other attendant evils vanished like a charm. This was the first case of remarkable success, and it brought in many more. The Babu's lodging at Chandernagore where the first victory was gained, and afterwards his dwelling house at Calcutta, came to be thronged with patients of all descriptions, but chiefly those suffering from malarious fevers, patients who had derived no benefit from the old system. The majority of these patients recovered, and the fame of the Babu and of Homœopathy spread far and wide. And it was then, but not till then, that my attention was arrested by the unparallelled success thus achieved, though I must observe it to my shame, that Babu Rajender Dutt is almost my next door neighbour; such is professional jealousy and professional pride! However, once convinced of the efficacy of the despised infinitesimals, I studied the system in right earnest, and finding it of incalculable superiority over what I was taught to believe as the only rational system of medicine, I proclaimed my convictions at a meeting of the Bengal Medical Association in February 1867, disdaining to ignore the life-giving truth by stifling my conscience, with what result is probably not unknown to you.

Since the year 1867 I have had a most extensive experience of homœopathy in its relation to the present epidemic, having had under my immediate observation upwards of Five Thousand cases, and I can most confidently testify to its immeasurable superiority over the orthodox system. Not to speak of the complicated cases with the grave sequelæ mentioned before, in which orthodoxy, with its heroic armentaria, is not only helpless but mischievous; in the management even of the ordinary cases homœopathy has decided advantages, inasmuch as it can do without purgatives, blisters, leeches, and unnecessary shaving of the head—no small relief to patients in general and to children and female patients in particular. With a few precious drugs homœopathy exercises a marvellous control over the morbid actions wherever manifasted.

Before proceeding to sketch the treatment of these fevers let us first put clearly the problem before us. From the description we have given above based upon a large observation of treated and untreated cases, it must have been evident that these fevers are of variable durations—each case consisting of a series of attacks of variable durations, following each other at variable intervals from a day or two to a week or a month or even a year;—each attack again consisting of a series of paroxysms of variable durations, and following each other at variable intervals from a few hours to a day or two. Such being the nature of the fever, is it possible to arrest it at the very first attack, and the attack at the very first paroxysm? So far as my experience goes I do not think this is possible, so long as the patient continues to reside in the affected locality; and even his removal to a healthy locality does very seldom let him off without a series of attacks, which sometimes may be as grave as if he were in the affected locality itself. Even assuming that removal could secure exemption from future attacks, how can we advise exile of a whole people? Accepting then the hard fact that people, as a general rule, must reside in their homes, I must state it as an equally hard fact that so long as this is the case, I have not seen a single case of malarious fever which has terminated in one attack, far less in one paroxysm, under any system of treatment. I have thought it advisable to make this statement *in limine*, because I have been annoyed to find that some homœopathic practitioners seem to labour under the delusion that if a right selection is made according to the totality of symptoms then the disease could be extinguished in the bud. If this delusion were confined to themselves it would be harmless; but these practitioners make people share in it, and this gives rise to unncessary disappointment, which in its turn brings unmerited disgrace upon the system.

In the treatment of these fevers, it is important to bear in mind the stage of the disease at which the treatment is commenced, and the variety of the disease. Roughly speaking the whole duration of a case of malarious fever may be divided into two stages, the acute or the early stage when the sequelæ are not yet developed, and the chronic or the later stage when these become developed. The character constituting the variety of the fever is either intermittent or remittent. The determination of the stage and the character is easily made, but still it is necessary to bear them in mind. For though we have to rely upon symptoms in their treatment, yet the same symptoms have not the signification and bearing and consequently the same importance in the different stages and varieties.

I have seen *aconite* prescribed not only in the last stage, but in the last state of the last stage, simply because the patient was in a slight paroxysm of fever! After the stage of the disease itself we have next to consider the stages of a paroxysm in reference to the order of their succession, and the order of their appearance according to the hour of the day.

In the early stage, during a paroxysm, especially of the remittent variety, *Aconite* is a remedy of the first importance, in subduing heat and allaying thirst. When the disease becomes established as an intermittent the sphere of its usefulness becomes narrowed into those cases only in which the accessions come on in the evening.

When along with high fever there are symptoms of cerebral congestion indicated by headache or heaviness of the head with blood-shot eyes, then *Belladonna* after *Aconite,* or in alternation with it, is of service. From the remarkable success that attends the employment of *Aconite* and *Belladonna* in the rapid subdual of the febrile paroxysm without the time-honored refrigerants, diaphoretics, and purgatives, allopaths have come to recognize the value of these drugs, and use them in the same conditions, but in doses, however, too minute to conceal the source whence they are borrowed.

When there is congestion of the liver, indicated by tenderness in the hepatic region, with or without jaundice, *Bryonia* after or in alternation with *Aconite* is remarkably useful in relieving the congested organ. *Bryonia* is also useful in congestion or inflammation of the bronchial mucous membrane and even in pneumonia, but if it does not succeed well in the latter, *Antim. Tart.* seldom fails ; and in case of hepatization *Phosphorus.*

Bryonia of all drugs is of the greatest service in the remittent variety of the disease. *Bryonia* and *Rhus Toxicodendron* in alternation are the remedies I have chiefly relied upon in those severe remittents which, in every thing excepting the peculiar eruption, resemble the typhus of Europe. In remittents similarly resembling the typhoid or enteric fever, that is, when there is diarrhœa, whether with or without ulceration of the small intestines, I have derived the greatest benefit from *Baptisia.* When with the looseness there is tympanitic distension of the abdomen *China* gives me good service, failing with this I use *Antimonium Tartaricum* with success.

Cases attended with obstinate bilious vomiting are benefited by *Eupatorium Perf.* which seems to have a remarkable control over these cases, especially when the accessions come on in the morning, with thirst commencing long before the chills, and continuing throughout the chill and the heat, or when they are of the double tertian type, one day occurring in the morning and another day in the afternoon, the morning and the afternoon paroxysms being respectively severer and lighter. But even apart from this type I have found *Eupatorium* useful in cases where the irritability of the stomach is so great that not only nothing is retained, but there is vomiting after even the slightest draught of water, so that the very sight of water is dreaded by the patients while suffering from burning thirst. One such case has been recorded in the *Calcutta Journal of Medicine,* and this case gained me a medical man for a convert.

I need hardly tell you what *Ipecacuanha* has done in the way of giving converts to homœopathy. It is very good indeed where there is persistent *nausea,* but it is hardly useful where there is obstinate *vomiting.* In these cases *Eupatorium,* as just said, *Antimonium Crud., Antim. Tart., Nux. Vom., Arsenicum,* &c., are more useful, of course being selected according to other indications as well.

In the very acute cases when the patient complains of so much heat that he seems to think fire to be issuing from his nostrils, his eyes, and his ears, and when along with this there is burning thirst, heat of head unrelieved by cold applications, great irritability of temper and restlessness, *Chamomilla* has acted like a charm. *Cham.* has been also remarkably useful in cases where there were nausea, bilious vomiting, bilious diarrhœa with colicky pains in the abdomen; also in fevers which had become aggravated by fits of anger or chagrin.

In acute cases with great heat and thirst, burning of the skin, great restlessness, with a despondent mood, *Arsenicum* in lower potencies has often been useful. *Arsenicum* is particularly useful in cases where along with the symptom already mentioned, there is diarrhœa which we have reason to suspect has been brought about by indulgence in fruits and cooling things in general.

I have found *Antim. Crud.* useful either when during the paroxysm there is considerable gastric derangement, such as loss of appetite with loathing of food; constant, loud, bitter eructations; nausea with vomiting of mucus and bile, with or without diarrhœa, and the tongue coated white; or when the fever sets in at noon, with or without chills, and is accompanied during the heat with somnolence.

For fevers returning at the same hour, but chiefly just after noon, and characterized by vomiting and diarrhœa, but chiefly vomiting, of bile or of the ingesta, and colicky pains in the small intestines, with or without, better with, canine hunger, I have found *Cina* to be a capital remedy. For fevers returning exactly at the same time *Sabadilla* has been sometimes useful, not at all to the extent it has received credit for.

For fevers returning in the afternoon and accompanied by frequent micturition, I have found *Cedron* almost a certain remedy.

For fevers quotidian, tertian, or quartan, coming on in the afternoon or evening and accompanied by loss of appetite, nausea with or without vomiting, and constipation, *Nux Vomica* has been particularly useful.

For fevers quotidian or tertain, and coming on in the evening or even afternoon, and attended with diarrhœa, *Pulsatilla* has seldom failed us.

For fevers accompanied by stupor and obstinate constipation, *Opium* (in drop doses of the mother tincture) acts almost like magic. For fever accompanied by somnolence and diarrhœa *Antim. Tart.* is useful. Much of the success of Graves's Mixture in fevers with cerebral congestion depends no doubt upon the homœopathicity of these drugs to the cases.

We seldom get fevers with the characteristics mentioned by Hahnemann, namely, thirst *after* the hot and *during* the sweating stage, rush of blood to the head, with distension of the veins; but when we do get them *China* in dilutions is useful.

Such are a few remedies which I have found eminently serviceable in the early stage of the disease. There are others which I might mention but whose indications cannot be given in the same laconic way. They require to be differentiated with greater minuteness and care. It is not a little remarkable that cases of malarious fevers, which come under homœopathic treatment from the beginning and which persevere under that method of treatment, very seldom in their later stages become complicated with the dreadful sequelæ mentioned in the beginning of this paper. But it is not always that we get cases to treat from the beginning. In fact, we very frequently do not get cases, till after they have been seriously mismanaged by the other systems; and, unless they are too far advanced, it is in these cases that the immense superiority of homœopathy is displayed. I shall succinctly notice the remedies that have upheld the honor of our system.

Nux Vomica and *Arsenicum* occupy the very foremost place in this list of remedial agents. Both are useful in enlargement of the spleen and of the liver. The fevers of *Nux Vomica* recur, as already said, in the afternoon or evening, but chiefly in the afternoon. The fevers of *Arsenicum* are of an irregular character generally, or they occur about or after midnight. In the fevers with predominant chills or shivering, *Nux vom.* is useful; in those with predominant heat *Arsenicum*. *Nux vomica* is appropriate when there is constipation or a tendency thereto; *Arsenicum* when there is diarrhœa. Dropsy is no contra-indication for *Nux Vom.*; but *Arsenicum* is *the* drug for this condition, whether it exists as anasarca or peritoneal effusion. It is not always, however, that *Arsenicum* succeeds in dropsies, and it is then that we pass to the province of *Helleborus niger*. Failing with these I think of *Digitalis* and *Ferrum Muriaticum*, both in drop doses of the mother tincture. *Cantharis* has done me excellent service in restoring the renal secretion, when everything else has disappointed me.

Bryonia is generally looked upon as a remedy suited to the acute stage of malarious fevers. But I have found it of remarkable utility in cases of enlarged liver with or without jaundice, and with or without enlarged spleen. The Homœopathicity of *Bryonia* is all the greater when along with enlargement of the liver there is congestion of the bronchial mucous membrane. *Bryonia* is useful also in the constipation, very often present in these cases, due to deficiency of the hepatic secretion.

Similarly the use of *Belladonna* should not be confined to acute cases alone. It is an excellent remedy in the advanced stages with visceral enlargements, especially when the fever is of the double quotidian type. I have found it useful in cases, when along with itching of the nostrils, there is grinding of the teeth during sleep.

In the cases of inveterate drunkards suffering from malarious fevers, and in whom along with enlargement there is cirrhosis of the liver, with jaundice, loathing of food, constipation, anasarca and even peritoneal dropsy, I have succeeded in charming away this array of terrible complications with *Lachesis.*

Calcarea Carbonica is a remedy which has given me good service in cases, especially of children and adolescents, with enlarged liver and spleen, with a tumid abdomen dependent upon implication of the mesenteric glands, with or without anasarca, with or without diarrhœa, but especially with diarrhœa, and with fevers recurring in the forenoon. Young children, with these complaints and in whom there has been slowness in the development of the teeth, and of the osseous system generally, are often singularly benefited by this drug.

In the above sketch of the fever and its complications I have omitted to mention one most distressing complication, which may be present alone, or in company with other complications. This is neuralgia. I have recently had to treat a case in the person of a medical friend, in whom the neuralgia first showed itself in the brachial plexus and then in the intercostal nerves. For the first manifestation I derived, or rather the patient derived, the most unexpected benefit from *Lycopodium* and for the second from *Causticum*; and in fact I have seldom failed to relieve such neuralgias with the self same remedies, other symptoms corresponding. This case is recorded in the *Calcutta Journal of Medicine* for Nov. & Dec. 1873.

Of the use of *Pulsatilla* in the chronic cases I need not say much, as it may be used with the indications given above. It is useful in cases with enlarged spleen and liver. I shall only mention that it has been of remarkable benefit in cases where the paroxysm commences with toothache which continues throughout its whole duration. It is useful also in cases of enlarged Pancreas which may be detected by palpation, as well as by the peculiar diarrhœa associated with it.

Sometimes from the very beginning, but chiefly when they become chronic, malarious fevers, in this country in particular, seem to pay particular homage to our satellite, regularly appearing with every new and full moon. In these cases *Silecea* is the remedy upon which I have chiefly relied, but I have also used with benefit, *Calcarea Carb.*, *Clematis*, *Rhus tox.*, *Nux Vom.*, *Arsenicum*, *Causticum*, &c., selecting them according to their indications.

Natrum Muriaticum has often cured inveterate intermittents, especially after abuse of Quinine, but it requires to be selected with care. One of its characteristics is inclination to sleep during the chills.

Sulphur is a remedy which we are recommended to use when other remedies do not seem to produce their desired effects. This I look upon as a superstition. Unless we can use *Sulphur* according to its own indications, it will be of no earthly use whatever. One of its indications, which we have found to lead to happy results, is heat with partial sweat.

Carbo Veg. is an excellent remedy when the malarious cachexia, indicated by anæmia and prostration, is much developed, and when there has been much abuse of Quinine and Iron in the early treatment of the disease. It is particularly appropriate when there is diarrhœa with flatulent distension of the stomach and of the small intestines, and when the paroxysms of the fever are ushered in by extreme coldness of the feet. *Carbo Veg.* is especially suitable after *Arsenicum.* When the prostration is very great, an alternation of these remedies is often of greater efficacy than the use of either alone.

Though dysentery is not a frequent complication of malarious fevers when left to themselves, yet we very frequently have to treat cases with this complication as the result of heroic treatment. In such cases my chief reliance is upon *Ipecacuanha* and *Nux Vom.* In advanced cases when there is sloughing and ulceration of the colon, we have recourse to *Arsenicum*, *China*, *Silecea*, *Colocynthis*, *Lachesis*, &c., the indications of which it will be too long here separately to point out. When the dysenteric symptoms are acute, we need not hesitate to use *Mercurius Corrosivus.* When we have reason to suspect that the dysentery is dependent upon erysipelatous inflammation of the colon, *Belladonna* and *Rhus Tox.* often give excellent results.

For Cancrum oris the best remedy is *Arsenicum.* After it, *Carbo Veg.*, *Silecea*, *Lachesis*, *Aurum Met.*, *Aurum Mur.*, *Ferrum Mur.* (in massive doses), *Carbolic Acid* (in dilutions), *China*, *Quinine* (in massive doses), *Sulphur*, *Hepar Sulphuris*, have been found useful very nearly in the order in which they are mentioned. The best application is clarified butter, or calendula lotion or cerate. I do not think *carbolic acid* as an external application is of much use.

The patients get so much disgusted with the smell that they soon lose all appetite. For the hæmorrhages that from time to time take place, strong lotions of Arnica are often useful. Failing with this I use *Hamamelis.*

As yet I have said almost nothing about the dose and the dilutions I use. As the question of dilution and dose is still unfortunately one of the unsettled points in our school, it behoves me just to say with what dilutions and doses have I been most successful in these fevers. My highest dilution has never exceeded the 30th decimal, and I have seldom had to descend to lower than the 3rd. In exceptional cases I had to go to the mother tincture as already pointed out.. My medium dilution is the 6th decimal. But I must say that in the case of some drugs, such as *carbo Veg., Calcarea Carb.,* &c., I derive the greatest benefit from the 30th. In the case of adults I use the tincture in quantities not exceeding a drop; in the case of infants and very young children, the globule, seldom more than two or three at a time.

Gentlemen, I have been admonished by our President to be brief, and I must therefore here bring to a close this paper full of shortcomings and imperfections as it is. I have not enumerated, as indeed it is scarcely to be expected that I could enumerate, all the remedies that even in my own practice I have found useful in the treatment of the fevers with their formidable sequelæ which have been raging in this country with epidemic virulence for nearly a quarter of a century. In presenting this paper to you my object has been not to write a treatise, but simply to give a brief comparative sketch of my experiences with both those systems of treatment which I have practised in the fevers in question, in order to show the vast difference there is between them in point of resources and power of control over the disease; and if I have shown, that the difference is all in favor of Homœopathy my object has been gained.

Gentlemen, I have no doubt you must have deemed it rather strange that I should have said nothing regarding *the* drug which gave birth to our system. The fact is, I have reserved my say about it for the last. The position of Peruvian Bark and its alkaloid Quinine in the treatment of malarious fevers is the same as that of Camphor in the treatment of Cholera. If we endeavour to sum up the opinions expressed regarding the one drug and the other, we shall find them about equally divided into affirmation and negation. For instance just as according to some Camphor is the one and sole remedy for cholera in all its stages, so Cinchona is deemed to be the remedy for malarious fevers in all its stages. Again just as according to others Camphor is hardly of any use in any stage of cholera, Arsenic, Veratrum, &c., being the true remedies according to indications, so Cinchona is deemed of quite minor importance, the true remedy being found by the totality of symptoms. Between these extreme opinions, there is of course a variety of all shades, and for a beginner it is quite a puzzle to find out the true one. But the true opinion must be found out, the decision must be arrived at on the subject, or human lives must be sacrificed. The question is not simply of less or more prolonged suffering, but even of life or death. Medical men, who have never practised in epidemic-stricken localities, can form no idea of the gravity of the cases we have to deal with. Some of the cases, as I have said before, resemble cholera in the suddenness of their attacks and in the dreadful collapse they produce, sometimes in the pre-febrile and sometimes in the post-febrile stage, and the object of prime importance in these cases is to prevent the accession. I know of no drug which can effect this with so much certainty as peruvian bark, or to speak more properly, its alkaloid quinine. I am aware of the objections which have been urged against its true febri-genic properties by Langheinz of Darmstadt and others, but whether it can or cannot produce typical intermittents I need not waste time to discuss. There is ample evidence, both allopathic and homœopathic, to show that of all drugs, this is pre-eminently one that can stamp the character of periodicity upon most of our morbid actions, and therefore this drug is *par excellence* an antiperiodic, and it is this invaluable property that is absolutely wanted in the treatment of the very grave cases we have to deal with here, as indeed, I believe, in all malarious-epidemic-stricken localities.

As the result of no less than eight years' hard experience with both the old and the new schools of medicine in the treatment of one of the direst epidemics that could fall to the lot of a medical man to deal with, I have found that in the early stages we can seldom dispense with the use of Quinine. My rule is this: When the cases are of the gravest character described above, I at once exhibit the drug irrespectively of the stage of the paroxysm, in large doses during the paroxysm, and in small and repeated doses during the apyrexia. It is by this and this practice alone that we can avert death in the majority of cases. When the cases are of the ordinary character, I commence the treatment with the remedies described before, with which we undoubtedly succeed in managing the paroxysm infinitely better than our brethren of the old school. But if, in spite of this, attack follows attack enfeebling the patient, then I use Quinine as an atiperiodic, and I combine with it the tincture and the decoction of the crude bark, that is, the alcholic and the aqueous extracts, to concentrate as much as possible all the virtues of the drug. The result generally is, either the total disappearance of the fever at once, or the gradual diminution of the severity of the attacks till they cease to appear. But as I have said this disappearance is seldom permanent. The fever returns after some time, with the same, or new symptoms. Quinine again may be used with success, but with each attack after its exhibition, its utility diminishes, till finally it ceases to be a remedy, and its blind, persistent use is sure to result, as it does result, in mischief. And now is the time for the full development of the efficacy of the remedies mentioned in the preceding sketch, which seem to act better after the system has been saturated with, or rather acted upon by, Quinine. The fact is, practitioners, flushed with their unexpected success in chronic cases with infinitesimals alone, and absolutely without Quinine, were deluded into the belief that they could dispense with Quinine altogether, at least, with its massive doses, but when the hour of *their* trial came, when people began to confide them with cases from the beginning, they began to be disappointed, though unfortunately they could not see their mistake. In spite of greater diligence in the search after the appropriate remedy, in spite of renewed endeavours to hunt after symptoms of the patient and symptoms in the *Materia Medica,* the true remedy seemed always to elude the search and mock the struggle, till the cases are made over to the allopaths who with a few doses of Quinine effect the cure. Oh ! the cure is only for the time being, it is said with the strained triumph of a discomfited man. However for the time being, the cure might have been, it was a cure, and that was a great thing for the patient.

Gentlemen, I verily tell you that it is bark and its alkaloid which have kept up the vitality of the Old School, and it is our disloyalty to them which has stood seriously in the way of the progress of our own School, and which not unfrequently brings unmerited ridicule and abuse upon our doctrines. In rigidly adhering to the minutiæ of our system, I am afraid, a large number of our brethren have become too exclusive and intolerant. But in our anxiety to be homœopaths we must not forget to be physicians, in our zeal to worship Hahnemann we must not cease to worship Truth wherever found.

REVIEW.

Essays on Medicine. Being an Investigation of Homœopathy and other Medical Systems. By WILLIAM SHARP, M. D., F.R.S., &c. &c. The Tenth Edition. London. Henry Turner & Co. 1874.

THIS is a big octavo volume of 800 pages, containing twenty-six Essays. With the exception of the last, all the essays had seen the light before the publication of the present volume. The first thirteen essays, commenced in 1851, have been before the public since 1856, under the title of *An Investigation of Homœopathy*. For full five years from 1856 Dr. Sharp seems to have laid aside his pen, perhaps content that what he has already written has been enough to purge Homœopathy of its absurdities and thus secure for it the attention it deserved; and it was not till September 1861 that he was provoked to take it up again by a most unseemly attack on Homœopathy in *Fraser* from no less a personage than the late Sir Benjamin Brodie. The reply, as might have been expected from Dr. Sharp's previous writings, was masterly,—thorough, exhaustive, and crushing. A small portion of this reply expanded constitutes the fourteenth essay in the present collection. Dr. Sharp's next appearance is in 1865, when as President of a Medical Society at Birmingham he delivers an address on Medical Systems in which he treats of pathology. He has since up to 1872 given us an essay every year. His pen has been more fruitful in the year past as well as in the present year, having given no less than six very valuable essays.

Such is a brief history of these Essays which, at least the first thirteen of which, have been instrumental, more than any other writing in the whole range of Homœopathic literature, in gaining converts to Homœopathy both from amongst the profession and from amongst laymen. We are thankful to acknowledge our own indebtedness chiefly to these writings for our conversion to the New Doctrine. It is questionable if any candid reader of them has ever been able to resist the conviction which they are sure to bring home to the unbiased mind, that Homœopathy is not the monstrous delusion that it at first sight appears to be, that it contains glimpses of a truth which is more precious than any yet discovered. What is it in these Essays which has crowned them with such unparallelld success ? One word expresses it and that is *Lucidity*—lucidity of argument and lucidity of diction. Dr. Sharp is gifted with a luminous intelligence, an impatience bordering upon abhorence of every thing that is dark and obscure, a singular freedom from prejudice, and a remarkable command of language whereby he renders his thoughts in the happiest light conceivable.

Parodoxical as it may appear, it is nevertheless a fact, that of all the obstacles that stand in the way of the acceptance of Homœopathy by the profession, the greatest is the manner in which it is presented by its Founder, and the manner in which all the extravagance of Hahnemann are defended by the so-called purists or his uncompromising followers. Gœthe said, "the Germans have the gift of rendering the sciences inaccessible." "Certainly," says Dr. Sharp, very justly, "Hahnemann possessed the art of making Homœopathy unacceptable." As we remarked in our March number for 1868, "Unhappily for medicine the mind of Hahnemann was, unlike the mind of Newton, full of speculative tendencies. It is rare to meet with a philosopher, Bacon perhaps excepted, who was so fierce in his denunciation of hypothesis, and at the same time so fond of fanciful hypotheses himself whenever necessary to support his views. This is the grand defect of his principal work, the *Organon*,—and this it is which has repulsed sober minds from devoting any attention to homœopathy. It is not unnatural to suppose that a doctrine, which is supported only by arguments derived from the vaguest and the most fanciful analogies, cannot be founded upon truth, and consequently does not deserve even to be investigated, far less practically tried." If Hahnemann had contented himself with simply stating the facts he had observed and the relationship he had discovered between them, if he had forborne attempting to explain those facts by fanciful analogies and supporting them by other facts which have not the remotest connection with them, homœopathy would ere long have been the recognized system of therapeutics, and the mind of the profession, instead of frittering away its energies in idle controversy, would have been engaged in improving and perfecting the superstructure, of which the foundation he had the glory of laying.

Apart, therefore, from the imperfections inherent in every new discovery, homœopathy has the false and fantastic aspect which has been put on it by its discoverer. In view of the importance of the truth contained in it, the duty of every earnest and true physician believing in homœopathy becomes two-fold—*firstly*, to show what it is or ought to be and what it is not or ought not to be made to appear, in other words to draw its true outline and divest it of its repulsive aspect, so as to induce his unbelieving colleagues to look into it and turn it to the service of suffering humanity; and *secondly*, to remove its imperfections, to develope it into its full proportions and magnitude by carrying out all its requirements and fulfilling all its conditions. In the "Essays" before us Dr. Sharp has applied himself to the task of performing this two-fold duty, and he has done it in a manner so as richly to deserve the plaudit of "well done." It is impossible in the compass of a brief article to review the work so as to do justice to it and the subject; to exhibit before the reader the amount of learning and thought and originality displayed by the author; to shew where, notwithstanding all this, the subject requires further elucidation; and to point out where the author himself has erred. We shall therefore content ourselves with giving a bare analysis of its contents, noticing the most salient points.

In the first Essay, one of the best in the whole collection, the author removes the popular misconceptions regarding homœopathy bred and fostered by orthodoxy, and shows in the simplest and clearest manner—What Homœopathy is or rather professes to be? He shows first that Homœopathy is not what it is imagined to be, namely, that it is not a *novelty,* inasmuch as the principle was recognized, though vaguely in ancient India, and fully by Hippocrates by whom it was carried into actual practice; that it is not a *quackery,* inasmuch as the essence of quackery is secrecy, whereas the utmost openness is the very characteristic of homœopathy; that it is not necessarily *globulism,* the association of the globule being accidental and simply a matter of convenience; that it is not an *uncertainty;* that it is not the *infinitesimal dose,* having been discovered by experiments with appreciable doses; that it is not *a single remedy,* that is, does not propose to treat all diseases with one panacea; that it is not *magic,* pretending to charm away disease; that it is not *a dishonest fallacy,* which would have been incompatible with its steady progress. He then shows what homœopathy is, namely, that it is *a general fact, or a principle or law of nature;* that it is a *practical fact,* to be tested by evidence, not reasoned away on *a priori* grounds; that it is *simple and intelligible;* that it stands upon *its own comparative merits, gaining by comparison,* as statistics abundantly shows: that it is *a guide in the choice of the remedy not of the dose,* which has to be determined by a separate series of experiments; that it *aims at eradicating or permanently curing the disease,* where of course this is possible, for the symptoms of an ailment can only be removed by removing the cause of the ailment; that it *economises and conserves the vital powers* by avoiding all spoliative treatment; that it is *gentle and agreeable*; that it *administers one medicine* at a time; that it learns the properties of its remedies by *experiment upon health and not upon disease;* that it is *applicable to acute as well as to chronic diseases;* and that it is *prepared for any new form of disease* far better than the old method.

In Essays II and III, Dr. Sharp deals with the Controversy on Homœopathy. It is true that the first thirteen Essays are controversial, as distinguished from the remaining thirteen in which the author embodies the results of his own researches. In the essays immediately under notice, however, he disposes of the *a priori* arguments urged against the new system in a general way, reserving to the succeeding essays special and more detailed notices of them. Dr. Sharp very properly admits the inadvisability and even the folly of dragging prosessional questions before the tribunal of the lay public, who must be acknowledged to be incompetent judges in such matters; but he shows conclusively that the folly rests with the old and not with the new school. "Hahnemann did not take this step; he published his first Essay in Hufeland's journal, a periodical strictly professional, and of the highest character and standing in the profession. The step was taken by the physicians of the old school, and at the very commencement of the discussion; for, instead of meeting Hahnemann, on their common ground, with arguments and facts wherewith to refute his opinions, they appealed to the public authorities, and by the aid of this professional force drove him from city to city, and from village to village. And, moreover, this appeal to the public by the allopathic portion of the profession has been continued to the present hour, and is still continued.* * It is plain that the homœopathists have no alternative; the affair is already before the public; it has been carried there by their opponents; they are compelled, however reluctantly, to plead the cause of homœopathy before this tribunal."

Having thus absolved the New School of the charge of exposing and compromising the profession before the general public, the author disposes of the arguments that have been brought forward against the Hahnemannian reform on the ground of authority, antiquity, majority, and improbability. "The matters are questions of science, not of authority; they are to be answered by observation, not by command," simply because "no man is born with such intuitive wisdom and knowledge as shall render him competent to answer them *ex cathedrâ*." Not only "no post of authority" but not "even any amount of knowledge upon *other* subjects, can qualify men to answer and decide upon such questions as these, without previous investigation." As for antiquity, "the present times are the ancient times and true antiquity, in matters of this kind, as has been testified often," by such men as Jeremy Bentham, Lord Clarendon, and above all by Lord Bacon. "Thus the argument from antiquity, when rightly considered, turns out to be in favour of Homœopathy, as the discovery of the latest period of the world." The argument from majority is met by "the fact that the minority who have adopted homœopathy have done so after having examined and tested it experimentally in their own hands, and have been thus led to embrace it from conviction of its truth; while the majority, who continue to reject it, have not examined it, will not examine it, and confessedly remain in ignorance of the nature and extent of the evidences in its favour." The argument from improbability attaches only to the dose, and resolves itself into the improbability of preparing the dose, and the improbability of their efficacy. The first is either peurile or a wilful exaggeration and is refuted by a slight attention to the process by which homœopathic dilutions are prepared, when it will be seen that a few ounces, and not oceans of alcohol, are all that is necessary for dividing a substance into the decillionth part. As to the efficacy of the infinitesimal dose it "is a fact which 'strikes the eyes of all who do not keep them shut.'"

Having disposed of these general arguments against homœopathy, Dr. Sharp next addresses himself to the consideration of the special arguments advanced by Dr. Routh in his "Fallacies of Homœopathy." Dr. Sharp finds this a comparatively easy task so far as the principle of homœopathy is concerned, inasmuch as Dr. Routh assents to it to a certain extent, and "his own instances (in illustration) have laid a foundation which only required to be built upon, that it might become an impregnable castle of truth." As for the small dose, it is shown that as Dr. Routh admits "that small doses, and especially in large dilution, will often-times act very satisfactorily," the sweeping conclusion to which he comes from *analogy and theoretical grounds* that the infinitesimal doses can have no power upon the human frame, can have no logical weight as being utterly without the foundation of facts. It would have been well if he had tried the smaller doses of homœopathy and then pronounced judgment. His own experience with doses small compared to the ordinary doses of his school should have induced him to try doses smaller and smaller still, before venturing upon the wholesale condemnation of the infinitesimal doses of homœopathy on analogical and theoretical grounds.

With reference to statistics, finding that they are in favor of homœopathy Dr. Routh attempts to explain them away by a variety of subterfuges, but the crowning subterfuge of all is the assertion that "the homœopaths prove too much." "When we come to look at the homœopathic mortality," says he, "as collected from some of their hospitals, we find it is considerably less than the mortality of any given population, including the *healthy* as well as the diseased...... A 2 per cent. mortality is a common occurrence. The homœopaths thus prove too much, since their mortality including their worst and most severe cases, is positively less than that of ordinary populations in most European countries, which average 2 to 2½ per cent." To this Dr. Sharp replies, "that the mortality in the hospitals is what takes place during an average of less than a *fortnight's* treatment, while that of entire populations is the mortality in a *year !*"

In Essays IV, V, and VI the principle of homœopathy is discussed. Laws of nature are defined to be *general* or rather *universal* facts "which, not in a single instance, nor occassionally, nor generally, but always, under given circumstances, happen." Instances are given of several ascertained, established laws of nature, and it is shown how "before they were known, the departments, to which they severally belong, were characterized by blunders and guess-work, into which they have introduced method and certainty." In the case of medicine it is shown by well-cited instances how "the efforts made to relieve diseases have been, hitherto, either superstitious, or theoretical, or empirical." Yet if we turn to history we find in the midst of this general confusion that "at different epochs, and by various writers, from Democritus and Hippocrates downwards, something like the principle—similia similibus curantur—likes are to be treated by likes—has been feebly enunciated."—"But we are indebted to Hahnemann, a German of the last generation," continues Dr. Sharp, "for so powerfully and perseveringly announcing it as to have gained for it the attention of mankind." We should think we are indebted to Hahnemann for more than merely announcing the principle. Whatever we may think of the theories and hypotheses by which he attempted to explain it, there can be no question whatever that by actual experiments carried on for a long series of years with a zeal and devotion and self-sacrifice for which it is not easy to find a parallel in the whole history of medicine, he has more than announced it to mankind, he has established it on the surest of all foundations—success.

The proposition, then, "likes are to be treated by likes,"—that is, that diseases should be treated, to be cured wholly, pleasantly, and in the shortest time, by drugs which are found to produce symptoms similar to those of the diseases themselves when administered in health,—is before the profession ; and it is the duty of "every medical man who is conscientiously desirous of doing all the good he can to his suffering fellow creatures," to put it upon trial, and "the only trial upon which such a statement as this can be put is the trial by experiment," as "to argue about it would be foolish, and a waste of time." If *probability* of the existence of a law of healing is wanted to induce medical men to make the necessary experiments, it is furnished by the analogy of all the other sciences. "If there be laws," says Dr. Sharp, "regulating every department even of inanimate nature, shall there not be laws of life and health ? If there be laws of storms and tempests in the air and the ocean, shall there not be laws of disease—those tempestuous motions in the living body? Shall there be a magnetic bar to guide the affrighted mariner out of the intricacies and dangers of a storm at sea, and shall there be no compass to guide the physician in his efforts to extricate the sick man from the living tempest within him?" Induced by probability and urged by duty Dr. Sharp began his investigation by experiments with some twenty of the *best known* substances taken from the three kingdoms of nature, and found them curative in diseases similar to those they are known to produce—thus, *tartarized antimony* in inflammation of the lungs; *arsenic* in inflammation of the stomach and bowels and in certain eczematous eruptions; *copper* in cramp in the abdomen with diarrhœa; *corrosive sublimate* in dysentery; *lead* in constipation and paralysis; *murcury* in mumps, sore throat, and eruptions; *phosphorus* in inflammation of the stomach and bowels; *sulphur* in eruptions; *aconite* in croup; *belladonna* in headache and sore throat; *bryonia* in rheumatism; *colocynth* in colic; *kreasote* in vomiting; *ipecacuanha* in vomiting, asthma, and hæmorrhage; *nux vomica* in spasmodic pains in the abdomen; *opium* in constipation, apoplexy and delirium tremens; *rhubarb* and *senna* in diarrhœa; *veratrum* in cholera; *cantharides* in strangury. These cases, which occurred "in his own hands and under his own eyes," are offered by Dr. Sharp as exhibiting "the *kind* of evidence capable of being afforded, and which is the only kind the investigation admits of. The *quantity* necessary to produce conviction in different minds will vary according to their several convictions, but it will surely be considered the height of prejudice and bigotry in any one to reject altogether, and *in limine*, such evidence as this, or to refuse to investigate the subject for himself."

Having thus furnished the strongest *primâ facie* evidence of the truth of the homœopathic law it is possible to give, Dr. Sharp next proceeds to examine the conditions under which alone the law can act, in other words, to define the limits within which it acts and beyond which it does not and cannot act. These conditions have to be discovered both with respect to diseases and to remedies. As very justly observed by Dr. Sharp—"Great indistinctness of perception prevails upon this point, which is much to be regretted. It has caused a useless discussion on a theoretical question, whether the law is a *universal* or only a *general* law; it has also given rise to a widely-extended controversy on an important practical question, the use of so-called *auxiliaries*; and it has often placed medical men in difficulties out of which they have not known how to escape." It is impossible to exaggerate the importance of removing this "indistinctness of perception" of the boundary-line of homœopathy both for the sake of the public and of medical men. It is this indistinctness of perception on the part of medical men which causes them to strain the law beyond its legitimate sphere, the inevitable failure of which brings, indeed, merited disgrace upon themselves, but unmerited disgrace upon the law itself. It is this indistinctness of perception on the part of the public which makes them look upon the acts of medical men with suspicion when they have to struggle hard in cases where the law is inapplicable. Such a procedure on the part of the public re-acts upon weak-nerved medical men who, out of regard for their favorite law, cling to it with obstinacy, or from motives of expediency, have recourse to "clandestine proceedings." In either case the system which enshrines the law, and consequently the cause of truth and humanity suffer. For, as Dr. Sharp rightly observes, "nothing can damage homœopathy, or the character of homœopathists so much as clandestine proceedings." We cannot, therefore, be too thankful to Dr. Sharp for his masterly and straightforward attempt to bring precision into the domain of homœopathy.

The question of limits or boundary, in natural as in human laws, is, however, not often the easiest question to decide. And it is not surprising that even Dr. Sharp, with his more than ordinary torch-light, has not been as successful in this as in other parts of his "Investigation." In our humble opinion doubts and disputes must arise from various obvious but inevitable reasons. In many instances we cannot, and, in some instances, from shere carelessness or impatience we do not, define the laws of nature with sufficient clearness and distinctness even after we have succeeded in discovering them. Generally it is the fault of our reason, which, from its finiteness, is unable to draw the line between one law and another, in other words between one department of nature and another, when they pass into each other by gradual transition. Sometimes, however, it is more the fault of language than of reason, but then reason becomes faulty when it forgets the source of the imperfections, and thus permits itself to be swayed by those imperfections; in other words it is not often because there are really any absolute indistinctness and obscurity in the laws themselves, that we are thus led into error and confusion, but because in hastily ennunciating them we omit the conditions under which alone they operate, and which must be peculiar to each law, and we are very apt to forget the conditions that we have omitted, or forget that we have made any omissions at all. In the case of Homœopathy, the enunciation of the law, even at the very outset, was made with sufficient clearness to prevent future mistakes if only it had been borne in mind, but the discoverer became so enamoured of it, partly from its bringing order and blessedness where there was confusion and misery, and partly from its being his own discovery, as to see it pervading almost all the departments of nature.

The discussion of the limits of the homœopathic law has brought us to the verge of the limits of space at our command, and we have therefore to crave the indulgence of our readers to wait for the completion of our notice of Dr. Sharp's work till our next number.

Acknowledgment.

Our thanks are due to the authors and publishers of the following works, which we shall take an early opportunity of

The Diseases of Women Homœopathically Treated. Second Edition. Thoroughly revised, and parts re-written, embodying the results of more than twenty years' experience derived from constant practice at the London Homœopathic Hospital. By THOMAS R. LEADAM, Licentiate of the Royal College of Physicians, Ed.; Member of the Royal College of Surgeons. Eng.; M. D. Cleveland, U. S.; Fellow of the British Homœopathic Society; Late Physician for the Diseases of Women at the London Homœopathic Hospital. London. E. Gould and Son. 1874.

Homœopathy in Venereal Diseases. By STEPHEN YELDHAM, L.R.C.P. ED., M.R.C.S., Consulting Surgeon to the London Homœopathic Hospital; Fellow of the British Homœopathic Society, ETC. Third Edition. Revised and Enlarged. London. H. Turner & Co. 1874.

হোমিওপেথিক চিকিৎসা বিজ্ঞান। প্রথম খণ্ড। প্রথম সংখ্যা। শ্রীবিহারীলাল ভাদুড়ী কর্ত্তৃক সঙ্কলিত। কলিকাতা। সম্বৎ ১৯৩১। মূল্য ১।০ ॥

Gleanings from Contemporary Literature.

THE PATHOLOGY AND TREATMENT OF DISEASES OF THE HEART CAUSED BY EMOTIONAL INFLUENCES.

BY EDWIN M. HALE, M.D.

(*Read before the Illinois State Hom. Med. Society, May 20th 1874.*)

It will be remembered that I have read before this Society several papers relating to the effects of the will and the emotions on the heart. Without going over the same ground again, I will briefly allude to the *manner* in which the emotions do affect the heart.

The experiments of modern physiologists, Claude Bernard in particular, show that all sensations act primarily on the nerve-centres, through the nerves reaching from the periphery of the body to those centres. The excitation thus determined in the brain, or spinal cord, is then transferred to the nerve filaments which extend to the viscera and members, and hence the latter are affected only secondarily.

Of all the organs, the heart is the one which earliest and most profoundly experiences the influence of the sensitive excitations produced in the nerve-centres. So soon as any modification is produced in the central nerve substance, the nerves transmit this vibration to the heart, and at once the movements of the latter suffer a perturbation which is expressed in various ways.

If the ordinary bodily sensations experienced from physical influences thus affect the heart, through the brain and cord, how much more intensely do those mental sensations caused by purely emotional influences affect that organ ; for the emotions affect the brain in a much more direct and immediate manner than the physical sensations. Emotional influences do not always affect the heart in the same manner. In fact, their influence on the heart is as varied and diverse as their influence on the mind.

We say the mind is depressed by grief and excited by joy. In the same manner emotions of sadness or grief so depress the heart's action that it beats with great feebleness, or its motion is almost arrested, causing that condition known as fainting. Joyous emotions, on the other hand, so excite the heart that the frequency of its beats is often doubled.

The heart, says Fernand Papillon, is no more the seat of the sentiments than the hand is the seat of the will ; but it is a reactive which is modified by the sentiments with the utmost nicety and with infallible certainty.

Not only does the heart betray by the very disturbances of its normal rhythm the nature of the initial brain excitation, but it also produces throughout the whole organism disordered actions, the sum of which constitutes, as it were, the physical image, the palpable externals, of passions. But it produces this disordered action only by reacting on the brain, which is the organ of all the demonstrations and of all the movements in the nerves, and consequently of the muscles.

It is disbelieved by some, even at this day, that emotional influences can cause long-lasting functional disorder of the heart. Much less is it thought that they may cause structural changes in that organ.

In this connection the statistics of insanity are suggestive, if nothing else. Dr. Wilkie Burman, who has lately investigated the relations of heart disease with insanity, says : " Examination of the heart in the living and the dead shows that diseases of the heart are very frequent in persons suffering from mental diseases. In 500 cadavers, 36 per cent.

gave a diseased state of the valves and the apertures of the heart and aorta; 14 per cent. showed hypertrophy, without valvular disease; 30 per cent. showed hypertrophy, fatty degeneration, and other heart diseases of minor importance; only 20 per cent. gave perfectly sound hearts. Of 680 male patients, 44 per cent. had heart disease. The average weight of the heart is, in both sexes, when suffering from mental diseases, heavier by one ounce than in persons of sound mind. This increase may be ascribed to the valvular morbid states, or to the hypertrophy which is seen in chronic and recurring mania, and in consecutive dementia, often without valvular disease, and most frequently attacking only the right ventricle."

Heart diseases are most frequently observed in patients with hypochondriac melancholy; with the so-called "melancholy with suspicion," causing a suspicious, morose disposition, and it appears that the heart disease has some relation to it, whereby the subjective sensations offer a prolific foundation for illusions and delusions. In chronic cases, and for advanced mental disease, it shows an essential asthenic type, feebleness in the circulation, cold, livid extremities, and a weak, small pulse.

If these statistics show anything, they show first, that the presence of heart disease during mental disorder is too common to be an accidental coincidence; second, that in a proportion of the cases the heart disease must have been caused by the mental; third, that the coincidence of heart disease with melancholy is pretty conclusive that mental depression is a condition which leads to certain forms of structural changes in the heart. I admit, be it remembered, that diseases of the heart may and do cause many cases of insanity. But I must affirm my belief that emotional shocks or mental influences, may and do cause not only functional but organic heart diseases.

Take, for example, the influence of fright, sudden grief, or other sad and painful emotions. They suddenly diminish the rapidity of the heart's beating, and thus increase the amount of blood discharged from that organ at each diastole; hence the contractions by which it drives the blood into the vessels are very laborious and protracted. In some cases the shock (as from fright, terror, or the sight of blood), may at once stop the motion of the heart, and as the blood is no longer discharged into the vessels, fainting occurs. This fainting may not only simulate death, but may actually cause it, by rupture of the heart or tetanic and persistent contraction of its cavities. But if recovery occurs, the heart has received such a strain that it may take that organ weeks and months to recover, or it may not recover at all, but end in structural disease, for it is admitted now by all the best authorities that many functional cardiac disorders may, if persistent for a long time, end in organic disease.

Among the diseases of the heart which may be caused by mental emotions and psychical disorders may be enumerated first, cardiac irritability, angina pectoris, cardiac myalgia, palpitation, and weakened heart among the purely functional; second, hypertrophy with dilatation and with enlargement, certain valvular diseases, rupture and aneurism among the organic.

Right here it may be of interest to inquire, "Through what media do emotions act upon the heart?" The recent discoveries of M. Cyon afford us a basis for the most probable explanation of the phenomena. The following embodies the results of his researches:

The heart is provided with a number of little, self-acting nerve-ganglia, without relations to the brain, from which spring, under the influence of the blood, a certain number of motor impulsions. These ganglia govern the usual normal action of the cardiac apparatus; but the rhythm and force of the beatings are every instant modified by excitations having their origin in the brain. The brain sends out to the ganglia of the heart two sets of nerves, the retardator (pneumogastric) and accelerator nerves. Excitation of the former diminishes the frequency and augments the force of the heart's movements. Excitation of the latter produces the opposite results, increasing the number and lessening the force of the heart's contractions.

Now it is evident that the emotions, according to their quality and intensity, must affect these two sets of nerves either separately or together. Our next inquiry will be, then, can we classify the emotions and arrange them in such a way as to show those which affect these sets of nerves in a special manner, either to excite or depress?

After considerable study of the action of the various emotions, and guided by such authorities as Tuke, Winslow, Carpenter and Maudsley, I have ventured to arrange them as follows: First, Emotions which excite mainly the retardator nerves: Joy, rapture, ecstacy, hope (with faith), pride, courage, love, adoration, wonder and astonishment, to which we may add anger, rage and wrath. Second, Emotions which excite mainly the accelerator nerves: Grief, sadness, discontent, disappointment, melancholy, despair, remorse, fear, fright, horror, anxiety and wonder.

It may be said, in criticism of this arrangement, that we rarely find one emotion acting exclusively at one time. This is admitted, and it is the one chief element of uncertainty that prevents a perfectly satisfactory classification of the emotions. Suppose, for example, that we have joy and anxiety acting at the same time upon the brain. The result would be an excitation of both sets of nerves, causing an increased force with accelerated action of the heart. Again, astonishment from pleasurable causes would act altogether on the retardator nerves; but, if from unpleasant causes, on the accelerators.

Apparently the most opposite emotions cause similar heart symptoms, but, when we analyze the nature of the effects, they will be seen to be widely different. Thus joy and terror both cause palpitation, but the former causes increased cardiac action with augmented vital force; the latter produces an irritative frequency with deficient power. It may be asked, how can joy and fright both cause death? The action of an emotion is like the action of a drug. In small and repeated doses, quinine causes a continuous augmented action of the heart, not injurious unless too long continued; while a massive dose acts suddenly, causing cardiac spasm and fatal symptoms. So joy, moderate and continuous, increases the vital manifestations of physical and mental life, but sudden and great joy kills by causing persistent cardiac spasm. Fright or terror may also kill suddenly, either by causing immediate cardiac failure, if the emotion is overwhelming, or destroy life more slowly by producing an irritative frequency which will end in gradual cessation of the contractions of that organ.

Enough has been said to show that we must study the effects of the emotions as closely and in the same manner as we study the effects of drugs on the human organism. We ought, sometime, to have carefully arranged pathogeneses of the emotions, not only that we may recognize the peculiar diseases which they cause, but that we may use their influence as remedial agents for the removal of similar disorders.

Treatment.—We come now to the treatment of those disorders of the heart caused by the emotions. What is the first principle which should guide us in selecting the medicine, after we have prescribed the proper hygienic rules? The tenets of our school of practice give us the following laws, namely:

First, The medicine chosen must be one which is capable of causing in the healthy a condition and symptoms similar to each special case.

Second, The origin and direction of the medicinal force must be similar to the origin and direction of the original morbific force. This latter rule I consider of the utmost importance. Allow me to explain: In a case of irritable heart, when you have traced the cause to be excessive unexpected joy, the emotion first affected the brain through the soul. This shock was transmitted by the pneumogastric nerve to the heart, which it caused to palpitate violently, with increased force as well as increased frequency. An irritation of the cardiac ganglia was set up, rendering that organ more susceptible to any and all emotions. This irritability may become permanent, and possibly end in structural disease, unless it is arrested. In selecting the medicinal remedy, we must select one whose pathogenetic action begins in the brain, and in that portion of the encephalon which presides over the transmission of joyous and all other exhilarating emotions. The medicinal or drug force starting from that locality, when transmitted to the heart, must be capable of causing the peculiar kind of irritability which we find in the patient we are treating. Hahnemann and all his most scientific followers have recognized this rule, and when strictly followed it has resulted in some brilliant cures. Those who restrict themselves to covering the totality of existing symptoms will find the cure of their patients tedious and unsatisfactory-

Another rule I would add, of equal importance with the above, namely: When the primary symptoms of the case resemble the primary symptoms of the medicine selected, prescribe that medicine in the high attenuations. When the secondary symptoms of both the medicine and the disorder are coincidently present, the dose should consist of appreciable, or material, quantities.

We will now enumerate the medicines which will be found useful in cardiac affections from emotional causes, but in order to have a clear understanding of their action we shall compare the pathology of the emotions with the pathology of the medicines, namely:

The emotions of joy, rapture, ecstacy, hope, pride, courage, anger, rage, wrath, love, adoration, wonder and astonishment, all stimulate and irritate the retardator nerves and increase the force of the heart's action. Excessive and sudden joy, anger and rage over-stimulate the retardator nerve and cause sudden death by cardiac spasms. Of medicines, Ammonia, Agaricus, Cinchona, Coffea, Crocus, Cactus, Camphor, Belladonna, Digitalis, Hydrocyanic acid, Lycopus, Laurocerasus, Ignatia, Nux vomica and Cannabis indica, all stimulate the pneumogastric or retardator nerve and augment the force of the heart's contractions. Of these, Cinchona (and Quinine), Camphor, Belladonna, Digitalis, Hydrocyanic acid, Nux vomica and Ignatia, if taken in massive doses, are capable of over-stimulating these nerves to such a degree as to cause sudden death by cardiac spasm.

It follows, then, that among these medicines you will find the remedies for the cardiac disorders consequent on the morbific effect of those emotions which irritate and over-stimulate the retardator nerve. In our old repertories you will find many of these mentioned as having been recommended by Hahnemann and others.

As an illustration of the proper method of treating a case of prolonged cardiac hyperæsthesia from the combined effects of excessive joy and anxiety, I will narrate one that came under my care a few months ago.

A young married woman applied to me for the relief of an unpleasant nervous feeling in the chest, not amounting to pain, but an "uncertain, weak, weary sensation," as she expressed it. She was subject to alternate feelings of depression and exhilaration, a strange sensation of sinking and emptiness in the pit of the stomach, the heart's impulse was feeble, its rhythm not disturbed, but the pulse-beats were small, soft, and averaged 100 to 110 per minute, even when lying down. Here were symptoms which appeared to call for Collinsonia, Lycopus, Prunus and some others, but the history of the case revealed the true similimum. She had always been strong and healthy; but during the civil war her affianced was in the army during its most perilous campaigns, and on several occasions rumors of his death reached her; on one occasion she did not hear from him for several months, meanwhile it was supposed he was starving in the prison-pen of Andersonville. All this time her heart was being irritated and weakened by the emotions of anxiety, grief and despondency. How true the ancient adage, "Hope deferred maketh the heart sick." At last, when she had nearly given him up for dead, he suddenly appeared before her, but wan, thin, and pale—a mere shadow of his former self. The shock was sudden and overwhelming, not of joy alone, but mixed with astonishment, pain and sorrow.

As we rarely find among the sick an affection of one organ and tissue alone, so do we rarely find cases where one emotion unmixed with others exercises its specific uncomplicated influence. In this case, however, joy was the one predominant emotion. Her heart, already weakened and irritated by grief and anxiety, succumbed to the excessive stimulation of joy, and cerebral congestion, throbbing temples, loud hysterical laughter, followed by spasmodic weeping, and a sensation "as if the heart was trying to beat painfully in a cage," as she expressed it, ended in a nervous erethism which had never left her, although she was happily married and situated pleasantly in life.

The remedy in this case proved to be Ignatia. It covers all the symptoms and conditions, and also simulates the history of the disorder. One dose of a high potency was given and allowed to act a week. This was followed by doses of the lower attenuations, three times a day, and she was cured in a month.

In another instance, occuring in a healthy woman, where no previous anxiety had weakened the heart, the unexpected news of great good fortune caused a condition of extreme nervousness, with strong, quick palpitation of the heart, sleeplessness and cerebral erethism. Here the remedy was Coffea; a few doses of a lower attenuation promptly arrested the cardiac excitation after it had continued a week, notwithstanding the use of morphine and other anodynes.

The emotions of grief, sorrow, anxiety, expectation, discontent, melancholy, despair, remorse, fear, fright, horror and astonishment, all stimulate chiefly the accelerator nerve and quicken the heart's action, while they decrease the force of its contractions. Of these, grief, fright, terror, expectation, anxiety and fear have caused death from cardiac paralysis. The heart in such cases is found relaxed, flaccid, and its cavities uncontracted. Of medicines, Aconite, Arsenic, Calabar, Chloral, Cimicifuga, Crotalus, Gelseminum, Iberis, Lachesis, Phosphoric acid, Platina, Veratrum album and Veratrum viride irritate the accelerator nerve and weaken the heart. Of these, Aconite, Calabar, Chloral, Lachesis and Crotalus are capable of causing sudden death from cardiac paralysis.

It would not be proper, in a paper of this scope, to give the special indications for each remedy. Such indications are to be found in our text-books on materia medica. I will, however, give two typical cases as illustrative of the effect of medicines in the treatment of cardiac weakness.

A weakly young man, at the time of the great fire, awoke suddenly to find his room in flames, and no apparent means of escape. He was seized with an overwhelming terror, which caused profound syncope, and he was taken from the floor of his room apparently more dead than alive. It was many hours before he rallied from the shock, and then his mind and body both appeared hopelessly enfeebled. When I first saw him it was several weeks after that fearful night, but his face still wore a look of settled fright, mingled with terror. His skin was cold and clammy. Any reference to the fire caused a cold sweat to break out on his forehead and hands. His pulse was small, weak and quick; the heart's action feeble, quick and incomplete. His appetite was quite good, and there was no particular abnormal condition of the digestive system. Here was a case that called for Aconite, and a few small doses restored him to health in a very short time.

A young and blooming farmer's daughter met with a severe disappointment in her affections. Her lover left for parts unknown. Weeks and months passed, and no tidings. She did not weep or make any outward demonstrations of grief, but her color faded, her plumpness disappeared, the extremities became cold, a dry, hacking cough set in, her breathing became shallow, dyspnœa occurred on the slightest exercise, and her mind became obtuse. She seemed all the time brooding over her sorrow, but no sighs or tears escaped her. She ate when food was set before her, but expressed no desire for anything but to be allowed to be alone. The heart beat feebly and quick, and the pulse was almost imperceptible.

You will all recognize this as a case calling for Phosphoric acid, whose deep-seated and profound depressing effect on the nervous life of the heart made it the specific remedy in this case. A few drops of the third attenuation in water, three times a day, removed all the physical symptoms in a few weeks, and even the mental condition became more hopeful. After the medicine had nearly restored her, her recreant lover returned and finished the cure.

I ought to mention another class of remedial agents whose action appears to be soothing and calming to both sets of nerves above mentioned. They are Ambra, Castoreum, Asafœtida, Coca, Scutelaria, Guarana, Cypripedium, Valerian and Zinc.

Before we pass to the hygienic treatment of the disorders herein mentioned, we may as well try and answer the pertinent question : Why is it that the heart is affected abnormally by the emotions ? The heart, in its normal state, should have the same relative strength possessed by the general muscular system. It is the systematic use and not the irritation of a muscle that gives it strength and endurance. That great muscle constituting the heart can, under proper use, become one of the strongest in the human body. But it requires, to make it strong, plenty of fresh air free from carbonic acid, regular, active exercise, at least eight hours of good sleep, and the avoidance of alcholic stimulants, impure tea and coffee, tobacco, narcotics, an abuse of the passions, all the depressing emotions, and even an excess of those that are exhilarating. How many American men and women, in this year of our Lord, live up to these requirements ?

Generally the foundation for cardiac debility is laid early. Beginning in infancy, the young child is improperly dressed and improperly fed. It is allowed unnatural condiments and food before it should be weaned from milk and bread. It is placed in schools, and its tender brain crammed with the rubbish of dead languages, when it ought to be in the fields or gardens gathering flowers or romping in untrammelled freedom. Of all persons, the women of this country grow up with the weakest muscular structure, and consequently the weakest hearts. Place your finger on the pulse of the average school-girl attending a fashionable seminary or academy, or the ordinary woman of fashion ; you will find her pulse small, soft (or wiry) and very unequal. Her heart beats in the same manner, unless she is under the influence of some abnormal excitement. Her extremities are cold and blue, and a general languor pervades the whole body. What has brought all this about ? From childhood she has lived in hot, close rooms, in an atmosphere containing a large percentage of carbonic acid. She eats but little meat, milk or bread, but largely of cake, preserves, confectionery and other improper nick-nacks. She reads trashy novels, every page of which calls up emotions and passions which excite her mind and brain. The heart becomes weak and irritable, and in time it acts unfavorably upon the brain, rendering it excitable and susceptible to the very emotions most injurious to its integrity and vitality.

Compare this picture with that of the robust and healthy school-girl in the country or village, or a woman in any position in life whose physical training has had in it some element of common sense; or, we will say, some servant girl of Irish, Scotch or English descent, or an American farmer's daughter who is not too proud to work. How firmly the pulse of such a person beats under the finger! It seems to lift and throb with a strong vitality, and its rhythm is like the steady step of a trained soldier. We know that the heart which thus sends the blood into the arteries is strong, enduring and full of vitality.

The above pictures are applicable to men and women of all ages and conditions in life. The former class are susceptible to the malign influence of emotions which would not affect the latter abnormally. The healthy heart, strong and steady, is not affected unpleasantly or provoked to disordered or painful action any more than the trained pedestrian is affected unpleasantly by a walk of a few squares.

In conclusion, allow me to assert that we ought to teach that the heart, as well as the brain or the muscular system in general, requires regular, systematic exercise and training in order that it may have ordinary immunity from abnormal emotional influences.—*Hahnemannian Monthly*, July 1874.

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THE WORLD'S HOMŒOPATHIC CONVENTION.

THE YEAR 1876 is to mark an epoch in the history of Medicine. On the occasion of the celebration of the centennial anniversary of American Independence, there is to be a gathering in Philadelphia of homœopathic physicians from all parts of the world. The following letter of welcome together with the two following Records of the Committee of Arrangements, with which we have been honored by Dr. Carroll Dunham, Chairman of the Committee, are fully explanatory of the objects of the Convention; and we beg to draw the attention of our colleagues of British India, which means of Asia, to these documents in the hope that they will deem it a duty to the grand Truth they have the privilege to recognize, to take part in the forth-coming congress of brethren of the like faith.

We need hardly add that by colleagues we mean only those practitioners of Homœopathy who have had regular training in the science and practice of medicine in recognized Medical Institutions, and who hold their diplomas. It is necessary here to correct a misconception that exists as to the true position and functions of amateur and laymen practitioners of homœopathy. The misconception has assumed dimensions in this country which seem to threaten to be seriously detrimental to the interests of homœopathy itself. Theoretically, and therefore in the opinion of those who are unacquainted with the ways of the world, it may appear a matter of surprise that there should be any doubt as to that position and those functions, which are expected to be absolutely subordinate to those of the regular practitioner. But it is so easy to be a homœopath, a box of the ordinary medicines and a book on domestic practice being all that are requisite, and with these armamentaria it is so easy to combat disease and the orthodox practitioner, that the man who acquires this power easily finds himself in a position of importance, and it is not in human nature to relinquish such a position. Once finding himself above the level of the orthodox professional practitioner in the matter of the medical treatment of disease, it is easy to persuade himself to be on the same level with the professional homœopathic practitioner. Man is liable to err, and the professional man cannot be an exception to this rule. Once in error and found in that position by his non-professional colleague, his occupation is gone. All his previous scientific training is declared to be vanity, the best qualification for being a genuine homœopathic practitioner is declared to be absolute ignorance of the medical sciences save that of the *Materia Medica Pura,* Hahnemann is invoked in support of the absurdity, and the non-professional becomes transfigured by the logic of conceit into the really proper practitioner of Homœopathy.

We do not say that a layman, if he has intelligence, may not by dint of application, patience and industry attain to a sufficient knowledge of disease and its treatment so as to be useful in ordinary cases and in emergencies and thus be a material help to the regular practitioner or supply his place where he is not available; but we deny that without a systematic study of the medical and collateral sciences as required in recognized institutions a man can attain to that precise knowledge of the structure and functions of the human organism and of its relations to the surrounding world which alone can inspire true confidence in prescribing for its disorders, and which alone can keep the mind subdued in genuine modesty. We do not lay it down as an axiom that knowledge is the monopoly of colleges and academies, but in the case of the medical sciences where else are to be found the necessary opportunities and means for their proper cultivation? The instance of M. Littré of France may be cited as one contradicting our assertion, but it must be remembered that it is a solitary instance in the whole world, and that even M. Littré could acquire that extensive knowledge of the medical sciences for which he is celebrated only because of the opportunities which the institutions of his country affords.

Exceptions, however, only prove the rule, and for such exceptions, even if they were more numerous, the interests and the safety of the public demand that the rule of recognizing none but graduates of recognized medical institutions as the only regular and legitimate practitioners of medicine should not be broken. Once broken there will be no limit where the breach will end. Thanks to the restrictions existing, meritorious men may now be found amongst amateurs and laymen, but when these restrictions will be removed all distinctions of merit and demerit will cease, practitioners will spring up like mushrooms, every urchin into whose head the gurumahasay (school master) has failed to hammer any instruction turning, as the adage goes, into a physician, and thus ultimately the medical sciences will find their grave in the conceit of ignorance. Our advice, therefore, to amateurs and laymen who, out of compassion for suffering humanity, feel compelled to turn their thoughts and devote their time and energies to the practice of medicine, is that if they have really the good of their fellowmen at heart, let them by a proper study of the science qualify themselves for the art, and then they may rest assured their merit will be recognized, their services accepted, and themselves honored by all. So long as this is not done, from whatever cause, they should remain content with their position, they should not deem it a hardship if their professional colleagues hesitate to pass them as scientific physicians whose diagnoses may be relied upon as accurate and therefore whose cases may be published for the benefit of the world. We do not say, we have never said, they may not be useful as practitioners. On the contrary we have always said, and maintained, to the disgrace of the regular practitioner, they are eminently useful as pioneers of medical reform, and what can be greater honor than this? All that we wish is, that the pioneer should not forget his own level; that he should remember that reforms in scientific matters, however they may be appreciated and even introduced amongst the community by other than scientific men, can ~~only~~ be established and maintained by no other than scientific men.

To return from this digression: We know that the number of professional colleagues, taking even the whole extent of British India, is small,—too small, alas! to form a Society or any sort of organized body. But though the number is few we are confident there are not wanting in the few intelligence and experience and knowledge of the profession in all its details. In other words, we are confident that the appeal that has been sent to us to co-operate with our colleages of the New World will not be in vain, that is, that even if any of our colleagues here be not able to be personally present at the Convention, they will at least contribute essays worthy of the occasion, so that British India "may be worthily represented on the arena of science in the Convention."

It will be seen that the Transactions of the Convention are intended to "comprise not merely the papers that may be presented to the Convention, but likewise materials for a complete *History of Homœopathy* throughout the world," and for this object we are requested to furnish "a statement and history of the origin, growth and present representation of Homœopathy in the principal localities of British India," &c., &c. Ever since we started the *Calcutta Journal of Medicine,* we have been striving to arrive at this "history of the origin and growth" of homœopathy in this country, and from time to time we have been appealing through the Journal to those who either directly or indirectly had connection in this "origin and growth," and to the public in general who took and do still take interest in this origin and growth, and who may therefore furnish facts connected therewith. But our appeals have hitherto been in vain. No one has yet furnished us with a single fact regarding the first introduction of the blessed truth in this part of the world. We therefore deem the present moment, when we are invited to the task, we should say duty, by our honoured and zealous colleagues of the Youthful World,—we say we deem the present moment as the most fitting occasion when every one, who has at heart the interests of homœopathy, ought to endeavour to the best of his ability and opportunity to recover the past of Homœopathy from the relentless hand of Time. Besides its absolute and eternal interest in the abstract, Truth, in the progress that it makes among mankind, has a human interest which makes it all the more charming and endearing to all who long to cherish it as the shadow of the Divinity. The history of the progress of Truth is the history of the progress of the human mind in its aspirations after perfection, and such a history cannot but be interesting and instructive in the highest degree.

Notwithstanding that Truth ultimately triumphs, yet it is nevertheless but too patent a fact that its progress, from its incipient reception by the few to its ultimate triumph, is not uniform in all parts of the world, but varies amongst the various races and nationalities. For the reception even of discovered truth it is necessary that the individual concerned should have in the first place intellectual capacity enough to apprehend and appreciate the truth, and in the second place a moral nature strong enough to check the temptation of resisting the conviction of truth when it is of a nature to clash or to seem to clash with his interests. For it must be remembered that all truths are not like the abstract truths of mathematics, in the progress of which all people are either equally unconcerned or equally well disposed. Hence the history of the progress of particular truths amongst the various races and nations of mankind may serve as an index to their varying intellectual capacities and moral dispositions. Viewed in such a light the history of the origin and growth of Homœopathy amongst the different peoples of the world cannot fail to be at least as interesting and instructive as the history of the origin and growth of any other truth.

The History of the progress of Homœopathy in India must have peculiar interest of its own. But this history has not only to be written, but explored. The first introduction of the system is involved in the greatest obscurity. The only recorded notice of it we have seen is in the article on "Homœopathy, and its Introduction into India" in the number of the *Calcutta Review* for January 1852. In speaking of homœopathic hospitals in the world the writer says :—"In India, at present, we know of but three, that just opened in Calcutta, and those established by Mr. Brooking at Tanjore and Puducuta, under the respective Rajahs." This harmonizes with a statement made by Dr. Quin in the course of discussion on Dr. Bayes' Paper on the "Treatment of Intermittent Fevers" read at a meeting of the British Homœopathic Society in 1861. The statement we allude to is as follows:—"Aconite was also of much use in certain cases of intermittent fever: a military surgeon in India, a connection of a patient of his (Dr. Quin's) had been induced, from reading his book on the cholera, to try Aconite in his own case, one of jungle fever, which had resisted Quinine, Arsenic, and other febrifuges; and the result was so satisfactory, that he tried it in other cases, and then tried others of the medicines mentioned in the book in other diseases, and was so successful that he became a confirmed homœopath. The Rajah of the country where he lived was so struck with the results, that he had a native hospital established under his direction, where young native medical practitioners were enabled to see the homœopathic treatment put in practice. His example was followed by a neighbouring prince, who also established an hospital for homœopathic treatment, and both were under the directions of this surgeon, Mr. Booker (*sic*), who resigned his commission in the company's service in order to attend to them." Notwithstanding the discrepancy in the name of the surgeon in the two statements, there can be no doubt that both refer to the same individual, and that the hospitals alluded to by Dr. Quin were those mentioned by the writer of the article in the *Review*, namely, those established by the Rajahs of Tanjore and of Puducuta. The writer of the article testifies further to the appreciation and the consequent spread of the system at his time. He says—"The system has been extensively practised by amateurs, in the civil and military services, and by other gentlemen; and the success that has attended their practice, both upon Europeans and natives, has been such as to astonish themselves and all who have witnessed it. There is perhaps scarcely a large district in India, in which such an amateur has not for years been diffusing blessings around him; and there are scarcely any of our Indian readers, who may not satisfy themselves by personal observation of the success of this practice."

We have given the above extracts just to show that Homœopathy has a history in India worth recording, and also to point out the directions which research ought to take in order that materials may be gathered for the purpose. There were Homœopathic hospitals in Calcutta, Tanjore, and Puducuta. The one in Calcutta we know has long since ceased to exist, but it was under charge of a medical man who is not only living, but is with us, being no other than our Health Officer. The hospital had published reports, which we have not been able to lay hold of. But Dr. Tonnere has no doubt his own copies of the Reports, which we hope he will not grudge to place in our hands for the noble object we have in view. Besides, Dr. Tonnere, if he but minds—and why should he not?—can furnish us with other and more valuable materials for the early history of Homœopathy in India, which will to a great extent but redound to his own credit.

Then again, we ought to inquire about the Homœopathic hospitals of Tanjore and of Puducuta. These, in all probability, do not exist, for otherwise we would have heard of them. If they do not exist, when have they ceased to do so? and what caused their extinction? Where is Mr. Brooking or Booker, who was in charge of these hospitals? Is he still in the land of the living, or has he ceased from his earthly labors? Did the hospitals cease to exist with his departure from this world or from India? What has become of the young native medical practitioners who saw his practice in the hospitals? Did the seeds sown by the good surgeon fall upon barren, stony places or by the way side or among thorns, and none into good ground? Again, there have been from the beginning amateurs and other gentlemen, both in the civil and military services, who had extensively practised the system, and diffused blessings around them. Is it not possible to know something about them? It cannot be that all of them have gone out of the land of the living, and of the survivors are there not some who may still be found diffusing the same blessings in India? If there are, may we not expect to be favored with an account of their own doings, and of those of others whom they had or have known,—in other words, with what they may know of the early history of the progress of Homœopathy in India? After what we have already said we need not urge further the importance of the subject. We would only take leave to remind the gentlemen we are appealing to that if they would but condescend to vouchsafe the information sought for, their names will go down the stream of time associated with a most glorious and beneficent truth.

And now a word about the Convention itself. We beg to offer to our American Colleagues our hearty congratulations on the magnificent conception they have formed and are about to realize, of inviting homœopathic physicians from all parts of the world to meet as brother and brother in one of their renowned cities and on the occasion of the centennial anniversary of one of the greatest epochal events of history. We have no doubt that the invitation will be warmly responded to, and that homœopathic physicians of the world will, by their presence as well as by their contributions, "make the World's Homœopathic Convention a successful event, and an honor to Homœopathy." In reference to the business of the Convention, that is, as we understand it, in reference to the Essays and Papers to be produced and submitted for discussion at the Convention, the Sub-Committee have, we are glad to see, imposed a limit whereby subjects strictly pertinent to homœopathy are only included, such as Materia Medica, Clinical Medicine, and Surgical and Obstetrical Therapeutics, whereas other subjects, such as Physiology, Hygiene, Chemistry, Operative Surgery, Mechanical Obstetrics, &c., not directly related, are excluded. In other words, the business of the Convention will be confined, in addition to the preparation of a historical and statistical report of Homœopathy, to the fullest and most elaborate discussion of the Law of Similars it is possible in the present state of science to secure. Without any partiality to our own faith we confidently believe there are master minds in our branch of the profession, inferior it may be in number, but in no way inferior in comprehensiveness of intelligence, depth of knowledge of the medical and collateral sciences, and extent of erudition relating to the past of medicine, to the master minds of the orthodox branch. We have not, therefore, the least doubt that the subject will be treated in all its possible bearings, that its vastness, intricacies, and difficulties will be duly appreciated and attempted to be gauged, solved and explained. We have no doubt that, bearing in mind the fact that the human organism, and animal organisms generally, are most complicated structures governed not by one law, but by a variety of laws, physical, chemical, &c., the Essayists of the Convention will, in considering the disorders of such organisms and their rectification, give due weight and importance to those laws, and endeavour to define as far as possible the limits of the law of similars.

We are sorry to note that there is a morbid tendency in the present day to add to the Materia Medica, rather than endeavour to revise and correct it. In this way a large amount of rubbish has been heaped upon the rubbish that already exists and proves a serious obstacle to the advancement of true therapeutics. The great desideratum of our School is a reconstruction of our Materia Medica. We must never forget that though far in advance of the Materia Medica of the Old School, ours is yet far from having attained perfection. While admitting that its present unscientific form was a necessity of a first attempt, we must also admit that we sin against our Master to allow it to remain in that unsatisfactory condition. With the improved means of diagnosing with precision disorders of the inmost parts of the organism, we are without excuse if we remain content with mere symptomatology, and ~~do not~~ attempt to arrive at its organic substratum. It is of the utmost importance, therefore, that we should subject the old articles of the Materia Medica to thorough re-provings, satisfying all the requirements of modern physiology. We hope, therefore, that some of our brethren will come forward at the Convention with such re-provings of some, at least, of our important drugs.

We trust we will not be understood as being opposed to the introduction of new drugs. Far from it. We do not say that the disappointments that occur in practice, in spite of the most careful selection of remedial agents, are due entirely to defects in the Materia Medica as it aleady exists. We feel that drugs yet require to be discovered for many diseases and diseased conditions. All that we wish is, that the Materia Medica should be really *enriched* with drugs thoroughly proved, and not *encumbered* with drugs but imperfectly proved. Drs. Drysdale and Atkin have very justly said in their Introduction to the 2nd Vol. of the Pathogenetic Cyclopædia :—" The highest possible honour is due to careful provers of new, or re-provers of old medicines. They alone really advance homœopathy : it is their labors that will extend our knowledge of medicinal action and prepare the way for a scientific classification of the Materia Medica. The names of popular or successful practitioners will easily be forgotten; the self-denying provers will win for themselves a place in the temple of medicine, and their names will descend to posterity along with those of Hahnemann and his fellow-labourers as benefactors of their race."

While on the subject of provings and reprovings we would suggest some of our brethren would come forward with provings of some of our drugs on the lower animals. We mean regular and systematic *provings*, and not violent poisonings as is often done, and that to very little advantage to therapeutics. It is impossible to exaggerate the importance of what, for want of a better term, we would call Comparative Pharmaco-dynamics. Nor is it difficult to understand the great utility of such a development of the Materia Medica. We know what a flood of light has Comparative Anatomy thrown upon the difficulties of Human Anatomy,—how parts in the human organism whose position and functions could not be understood in themselves, have become intelligible when examined alongside ~~with~~ similar parts in the inferior animals. Similarly would, we believe, Comparative Pharmaco-dynamics throw light upon Human Pharmaco-dynamics. We go further and say that Comparative Pharmaco-dynamics would be a valuable index of difference of organisation amongst different species and genera and orders, &c., of the animal kingdom. Comparative Pharmaco-dynamics may, if properly and searchingly cultivated, lead to the discovery of the presence and absence of organs and parts in different animals. Thus viewing its importance we trust it will have its due representation at the Convention.

We lay so much stress upon a due representation of the work of Provings at the convention, inasmuch as we believe that the much-vexed question of the Dose and the Dilution, which has caused so much division in our School, if it is capable of solution at all, can only receive that solution from an analysis and comparison of pathogeneses under different doses of the same drug. Whether, as Dr. Sharp suggests, contrary effects result from the use of different doses, or any other relation exists between the effects of different doses, can only be ascertained by fresh provings with varying doses. We are, therefore, anxious that in future provings this point should be carefully attended to, and we are anxious that as there is ample time yet, some of our brethren would come forward with the results of investigation directed towards this important end.

The day the Convention will be held, being the day of the centennial anniversary of American Independence, will necessarily be a day of solemn significance. We hope our brethren of the Convention, whether present in person or by contribution, will be impressed with the double solemnity of their own meeting as well as of the day they have chosen for that meeting. We hope that in the Papers and the Essays, and in the discussions and the debates thereon, while no quarter will be given to demonstrated error, zeal to expose and fight out error may not injure truth when associated with it, as very often it is. We hope that our brethren in attempting to expose dogmatism and intolerance will not prove dogmatic and intolerant themselves. Announced so long before the event, the profession and no less the enlightened portion of the lay community are naturally expectant of great things from the convention. Our brethren will have fulfilled the most sanguine expectation of all, and achieved the greatest of triumphs yet achieved in the empire of thought, if by their utterancess they show that they have not only respect for truth, but greater respect for liberty of thought, without which truth can have no basis to rest upon. Thus conducted the Convention will, we have no doubt, be "a successful event and an honour to Homœopathy."

Committee of Arrangements of the World's Homœopathic Convention,
To be Held in Philadelphia, 1876.

Irvington-on-Hudson. Westchester Co. Ny. U. S. A.
November 10th, 1874.

To Mahendra Lal Sircar, M.D., *Calcutta.*

My dear Colleague,—

In the name of the "Committee of Arrangements" of the "World's Homœopathic Convention to be held in Philadelphia in 1876," I have the honor to send you herewith the Records (1 and 2) of the proceedings of the Committee; and to request you to submit them, together with this letter to the national Homœopathic Society of British India, if such a Society exist; or, if there be no such Society, to request you to associate with yourself such of your colleagues as you may deem proper and in conjunction with them, to co-operate with us in the work of the "World's Convention." If you have a national representative Society, we ask its co-operation.

We hope to have the honor and pleasure of welcoming in Philadelphia in 1876, as members of the Convention, some of our Eastern Colleagues from India.

The Transactions of the "World's Convention" are to be printed at the expense of the American Institute of Homœopathy "for distribution among its members and among the members and correspondents of the Convention."

It is intended that these "Transactions" shall comprise not merely the papers that may be presented to the "Convention," but likewise materials for a complete history of Homœopathy throughout the world.

In accordance with this design, and in order that British India may be properly represented in the historical portion of the Transactions, the Committee of Arrangements request you, to cause to be prepared, either by action of your national Society, or, if there exist no such Society, then, by the voluntary act of yourself and your associates, a complete historical and statistical Report upon Homœopathy in British India.

We suggest that this report should embrace:

1. A statement and history of the origin, growth and present representation of Homœopathy in the principal localities of British India.
2. The history and statistics of the Homœopathic Institutions, Societies, Dispensaries, Hospitals, Schools, Libraries, &c., of British India.
3. The history and statistics of Homœopathic literature, of all kinds, of British India.
4. A history of legislation, affecting Homœopathy in British India.
5. A statement of the present legal status of Homœopathic practitioners in British India.

In addition to this historical and statistical Report, we request you to cause to be prepared a scientific paper or Essay on some subject connected with Homœopathy and by which the Homœopathic physicians of British

India may be represented on the arena of Science, in the "Convention." And we request that both the Report and the Essay may be prepared and sent to the Chairman of the Committee of Arrangements in New York, as early as January 1st 1876, in order that full time may be had for translations (where necessary) and for printing, before the meeting of the "Convention."

Hoping for an early reply and for the cordial and earnest co-operation of our colleagues of British India in the work of the Convention, which if successful cannot fail to advance the interests of Homœopathy, and hoping for the pleasure of welcoming you individually in the United States, I remain, with sentiments of great esteem,

Your Friend and Colleague,
CARROLL DUNHAM, M. D.
Chairman, Committee of Arrangements.

Record (I) *of the Committee on the World's Homœopathic Convention.**

DURING the session of the American Institute of Homœopathy in Philadelphia, in June, 1871, a movement was inaugurated looking to the holding of a convention of homœopathic physicians from all parts of the world in 1876—the occasion of our National Centennial. This movement took shape in a communication addressed to the Institute, recommending the appointment of a committee "to consider the subject of a proposed *International Homœopathic Congress*, to be held in Philadelphia in the year 1876," said committee to report at the next session of the Institute. This recommendation was unanimously adopted, and the gentlemen who had signed the communication were constituted the committee. They are as follows: Drs. C. Hering, Carroll Dunham, R. J. McClatchey, W. T. Helmuth, B. W. James, I. T. Talbot, W. M. Williamson, T. F. Allen, T. S. Verdi, R. Ludlam, Pemberton Dudley, E. M. Kellogg, H. N. Guernsey, H. M. Smith, S. R. Beckwith, T. C. Duncan.

The members of this committee, scattered over a large portion of the Union, immediately engaged in an active correspondence, and when the committee met at Dr. Hering's residence in September, 1871, the views and suggestions of every member, whether present or absent, were laid before the committee. The importance and magnitude of the work to be performed prior to the assembling of the convention appeared so great, that it was deemed best that this committee should not enter into any details respecting it, but should simply indicate to the Institute a *method* by which this work could be most carefully and successfully planned and executed. Moreover, it seemed eminently proper that, in the adoption and carrying out of any plan, every part of the United States should be

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* From the press of "The Hahnemannian Monthly."

equally represented; whereas, in the present committee, a large majority were from the states of New York and Pennsylvania. Still further, it appeared advisable that, at the very outset, the active co-operation of all the homœopathic physicians of our own country, whether members of the Institute or not, and of all homœopathic societies and institutions, should be secured. The above objects were kept steadily in view in the preparation of the report and recommendations of the committee. The report, after stating in general terms the importance that must attach to such a gathering of medical men, as the one proposed and recommended, and the value of the work which might, by their joint efforts, be accomplished, approves of the time and place selected for the convention as being peculiarly appropriate. The recommendations of the committee are presented in the form of resolutions, as follows:

Resolved, That under the auspices and by the authority of the American Institute of Homœopathy, a convention of the homœopathic physicians of all countries, to be called "The World's Homœopathic Convention," be held in Philadelphia in 1876, on the occasion of the celebration of the centennial anniversary of American independence, and that the Institute hereby invites the co-operation of all homœopathic societies, institutions, and physicians of the United States.

Resolved, That at the present session of the Institute there be appointed by the President a Committee of Arrangements, to consist of one member from each state represented in the membership of the Institute, and that the committee thus appointed may appoint one additional member from the physicians of each state represented, and that the President appoint seven additional members from the city of Philadelphia, who shall constitute an Executive Committee, to attend to local details, under the direction and subject to the approval of the Committee of Arrangements. The Committee of Arrangements shall have full power to adopt and execute all measures which they may deem necessary for organizing the convention, determining the nature and order of the proceedings, and securing from it the best results for the cause of homœopathy. It shall present a full report of its proceedings at each annual session of the Institute.

The report and resolutions were presented to the Institute on Wednesday morning, May 22d, under a suspension of the order of business, and were concurred in without dissent. At the evening session of the same day, the President announced the following as the "Committee of Arrangements," provided for in the rosolutions:

Maine, William E. Payne; New Hampshire, J. H. Gallinger; Vermant, G. N. Brigham; Massachusets, I. T. Talbot; Rhode Island, J. C. Budlong; Connecticut, G. H. Wilson; New York, Carrol Dunham; New Jersey, J. Youlin; Pennsylvania, J. C. Burgher; Delaware, A. Negendank; Maryland, F. R. McManus; District of Columbia, T. S. Verdi; Virginia, J. V. Hobson; North Carolina, W. E. Freeman; Georgia, F. H. Ormes; Louisiana, W. H. Holcombe; Arkansas, A. Walker; Tennessee, J. P. Dake; Kentucky, W. H. Hunt; Missouri, T. G. Comstock; Ohio, S. R.

Beckwith ; Indiana, O. P. Baer ; Illinois, R. Ludlam ; Michigan, F. Woodruff ; Wisconsin, L. E. Ober ; Iowa, G. N. Seidlitz ; Minnesota, J. F. Alley ; Nebraska, W. H. A. Sisson ; Kansas, S. K. Huson ; California, G. W. Barnes ; Nevada, E. A. Wild.

Also, the following additional members from Philadelphia : C. Hering, R. J. McClatchey, B. W. James, W. M. Williamson, H. N. Guernsey, Pemberton Dudley, F. E. Boericke.

The following is a transcript of the proceedings of the Committee of Arrangements, since its appointment.

LINCOLN HALL, WASHINGTON, D. C.
THURSDAY, May 23d, 1872.

The Committee of Arrangements and Executive Committee of the World's Homœopathic Convention, appointed yesterday by the American Institute of Homœopathy, met at the close of to-day's session of the Institute. Present, Drs. Baer, Beckwith, Burgher, Dake, Dudley, Dunham, James, McClatchey, Ober, Seidlitz, Talbot, Williamson, Woodruff, Youlin—14.

On motion, Dr. Beckwith was called to the chair, and Dr. Dudley was appointed Secretary.

The Secretary read the list of members of the committee, after which a permanent organization of the committee was effected by the election of

Dr. Carroll Dunham, of New York, Chairman ; Dr. Pemberton Dudley, of Philadelphia, Secretary ; Dr. Walter M. Williamson, of Philadelphia, Treasurer.

The following gentlemen were nominated as additional members of the committee, from the states named, as authorized by the resolutions under which the committee was constituted.

Ohio, ...	Dr. N. Schneider, ...	Cleveland.
New Jersey, ..	" F. B. Mandeville,	Newark.
Iowa, ...	" W. F. Dickerson,	Des Moines.
Indiana, ...	" Wm. Eggert, ...	Indianapolis.
Pennsylvania,	" Jas. B. Wood, ...	West Chester.
Tennessee, ...	" L. D. Morse, ...	Memphis.
Wisconsin, ...	" T. F. Patchen,	Fond du Lac.
Michigan, ...	" J. G. Malcolm,	Flint.
Kentucky, ...	" W. E. Breyfogle,	Louisville.
Maine, ...	" Jas. B. Bell, ...	Augusta.

The above nominations were then unanimously confirmed by vote of the committee.

It was moved that the members from the remaining states represented in the committee, be authorized to nominate each an additional member from among the homœopathic physicians of his own state ; and that the Chairman be empowered to confirm said nominations. Unanimously agreed to.

Dr. Williamson then made a motion, which was adopted, that Drs. Dunham, Talbot, and Beckwith, be a committee, to recommend a plan of operations, including a method of raising funds to meet the necessary expenses of the Committee of Arrangements, and report before the close of the present session of the Institute.

On motion, of Dr. Talbot, the Secretary was instructed to notify the absent members of their election, to request them to nominate additional members as provided for at this meeting, and also to urge their hearty co-operation, and secure from them suggestions respecting the work of the committee.

The committee then adjourned to meet at the Arlington Hotel this evening at 7 o'clock, to hear the report of the sub-committee.

PEMBERTON DUDLEY, M. D.,
Secretary.

LINCOLN HALL, WASHINGTON, D. C.
FRIDAY MORNING, May 24th, 1872.

The committee having had no session last evening, pursuant to adjournment, owing to other engagements, met this morning at the call of the Chairman. *Present*: Drs. Dunham, Beckwith, Youlin, McManus, Baer, Talbot, Seidlitz, Ludlam, Schneider, Williamson, McClatchey, James, Dudley—13.

The sub-committee appointed to prepare a plan for carrying out the objects of the committee and for raising funds, made a verbal report, recommending that a circular be issued, and subscriptions solicited from physicians; the work to be in charge of the different members of the committee, each operating in his own state. And further, that the Institute be asked to appropriate one hundred dollars to meet the immediate expenses of the committee.

The sub-committee also recommended that in preparing the business of the convention, the committee should impose a limit restricting it to the subjects of Materia Medica, Clinical Medicine, and Surgical and Obstetrical Therapeutics, and excluding Physiology, Hygiene, Chemistry, Operative Surgery, Mechanical Obstetrics, and other subjects not directly related to the science of homœopathy.

The recommendations of the sub-committee, on motion of Dr. Youlin, were all adopted, and the sub-committee discharged.

Dr. Beckwith moved, and it was carried, that the Chairman and Secretary be instructed to prepare a circular, as recommended by the sub-committee, and transmit copies to the other members for amendment or approval.

A motion was adopted that a Finance Committee be appointed to take in charge and carry out the plan for the collection of funds, and to assist the Treasurer. Drs. Dunham, Beckwith, Talbot, McManus, and Ludlam, were appointed said committee.

On motion, it was ordered that the Treasurer be required to give bonds in a sum exceeding by one-third the amount of funds in his custody.

Dr. McClatchey said that he desired to have it go upon record, that the Philadelphia members of the committee—and he spoke on behalf of all of them—had no desire to be considered in any other light than as the servants of the National Committee, ready to do the bidding of that committee, and to labor in any and all ways under its direction to make the World's Homœopathic Convention a successful event, and an honor to Homœopathy, but having no desire or intention to exert any undue influence in the councils of the committee.

On motion, the Chairman was empowered to audit and correct, if necessary, the minutes of the present meeting.

The Committee then adjourned.

PEMBERTON DUDLEY, M. D.,
Secretary.

Record (No. II) of The Committee of Arrangements of the World's Homœopathic Convention.

At Niagara Falls, June 10th and 11th, 1874, the Committee of Arrangements met at the call of the Chairman, and adopted the following as its Annual Report to the Institute :

REPORT.

* * * The Committee have adopted and they recommend to the Institute to sanction and adopt the following plan for conducting the World's Homœopathic Convention :

"1. That the American Institute of Homœopathy meet in 1876 in Philadelphia as 'The World's Homœopathic Convention under the auspices and control of the American Institute of Homœopathy ;' and that the date of the meeting be determined at the Annual Meeting of the Institute in 1875.

"2. That the Bureaus and Committees of the Institute which shall be appointed in 1875 shall present their usual reports at the regular meeting of the Institute in 1877 ; and that, in 1876, in place of the reports and discussions of the Bureaus and Committees of the Institute, the World's Convention receive the reports and discussions of essayists and debaters of our own and foreign countries, to be appointed by the Committee of Arrangements.

"3. That the Transactions of the World's Convention be published in a handsome bound volume, to be distributed among the members of the Institute and their foreign guests ; and that the expenses be paid by the Institute." * * *

The Institute, by a unanimous vote, passed the following Resolution :

"*Resolved,* That the Institute accept and adopt the Report of the Committee of Arrangements of the World's Homœopathic Convention, and that it authorize the Committee of Arrangements to proceed to execute the plans adopted by them."

The following were elected to fill vacancies in the Committee of Arrangements :

Alabama, Dr. F. F. De Derkey, Mobile.
Mississippi, Dr. D. B. Chase, Natchez.
Texas, Dr. Wm. M. Mercer, Galveston.
Illinois, Dr. A. E. Small, Chicago.
New Hampshire, Dr. J. T. Whittle, Nashua.
Vermont, Dr. C. B. Currier, Middlebury.
Rhode Island, Dr. Wm. von Gottschalk, Providence.
Louisiana, Dr. Walter Bailey, New Orleans.

On motion it was resolved that the Chairman be empowered to fill all other vacancies, and that the Executive Committee have power to fill vacancies in their Committee, and the Chairman of the Committee of Arrangements was made *ex officio* a member of the Executive Committee. On motion the Chairman was directed to print the proceedings and reports of the Committee of Arrangements and distribute copies among the members of the same, that they may know what has been done and is proposed to be done by the Committee and what is expected of them.

At the meeting of June 11th, 1874, the Committee of Arrangements unanimously adopted the following Report of a sub-committee appointed to present a final plan of operations :

"1. That, wherever State or National Homœopathic Societies exist, they be appealed to to furnish historical and statistical reports concerning Homœopathy in their respective States or Nations ; where there are no such societies, that prominent resident physicians be requested to do this work ; and they recommend that the business of applying to these societies or individuals, in the United States, be placed in the hands of the Chairman of the Committee of Arrangements and of the members who represent the respective States ; and that, if the members representing States refuse or neglect this duty, the Chairman of the Committee shall have power to assign the work to other physicians. The object of associating the Chairman with the State members is that he may have cognizance of what is doing and may be able to supply deficiencies. Also, the Chairman shall be allowed to assign the business of soliciting and receiving reports of various *sections* of our country to such members of the Committee as may be peculiarly qualified to assist him.

"2. As regards foreign countries, that the Committee of Arrangements authorize their Chairman to appoint a sub-committee of two members to act with the Chairman as an 'Advisory Committee,' and which with the Chairman, shall conduct the foreign correspondence of the Committee of Arrangements and appoint essayists and debaters. They shall proceed, without delay, to the work of securing historical and statistical reports and of appointing and securing essayists, to the end that ample time may be allowed for the production of works worthy of the occasion, and shall make every effort to have all papers and reports in the hands of the Chairman as early as January 1st, 1876.

"3. It being, at this time, uncertain what number of foreigners may contribute to our Transactions, the apportionment of appointments as essayists, &c., among our own and foreign physicians, shall be left to the discretion of the Chairman and Advisory Committee; but an American physician should be appointed to prepare a historical summary of what has been done and is doing in each of the departments of medicine which it is proposed to discuss in Convention. This will complete the historical portion of the Transactions, giving us the history and statistics of Homœopathic INSTITUTIONS, REPRESENTATION AND THOUGHT.

"The Chairman and Advisory Committee shall also secure, if possible, in addition to essays from foreign individual physicians, official scientific communications from foreign National Homœopathic Associations.

"In recommending the lodgment of so much power and responsibility in the hands of the Chairman and a small Committee, the sub-committee are influenced by a consideration of the impossibility of conducting so complicated a business, to be done altogether by correspondence, if it be left in the hands of a large Committee scattered over the Union. But they regard it as well understood, that, whenever this may be possible, the Chairman shall consult with the entire Committee of Arrangements and shall seek and procure their approbation and consent to such measures as he and the Advisory Committee may propose."

This Report having been unanimously adopted, the Committee of Arrangements, on motion, adjourned subject to the call of the Chairman.

CARROLL DUNHAM, M.D.,
Chairman.

ROBT. J. McCLATCHEY, M.D.,
Secretary, p. t.

THE AGE QUESTION IN REFERENCE TO MEDICAL APPOINTMENTS.

A little more than four years ago Lord Mayo passed an order prohibiting the admission of persons into the uncovenanted service of Government after their attainment of the 25th year. The promulgation of this rule was due to the spirit of rigid economy which characterized the later period of Lord Mayo's administration of this country. However useful and economical this rule may be considered to be, as regards the ministerial officers in general, its extension to the whole of the uncovenanted service without any limitation, cannot be productive of unmixed good. If, for instance, this rule is rigidly enforced in filling up the judicial and medical appointments of the uncovenanted service, its practical effect will be to exclude some of the best men available for such appointments; and this practical exclusion will be due chiefly to other rules which also received the sanction of Government from time to time and under which it is not unfrequently difficult for persons to qualify themselves for the appointments in question at the age of twenty-five. The rules relating to the filling up of these special appointments do not appear to have been placed before Lord Mayo and his Council, when the Financial Resolution of 20th January 1871 was framed. The following extract from this Resolution shews however that it was far from the intention of the Government of India to apply the general rule to all cases without exception :—

> The Governor General in Council observes that the admission into the service of Government of any other than young men tends to throw upon the state an undue liability in respect of pensionary allowances.
>
> His Excellency in Council is accordingly pleased to declare that, as a general rule, no person should be admitted into the Uncovenanted Service of Government after he has attained the age of 25 years. But if, for special reasons, any one is after this date admitted at a later age, then, in the event of his being required to retire under the operation of any rule for the removal of officers from the service as superannuated on their attaining a particular age, the pension to which he would, but for this rule be entitled, shall be reduced in the proportion which the number of years of pensionable service he has completed, bears to 30 years, the full period required for a good service pension.

It is evident that in framing the above resolution the Government of India had the assistants of the public establishments chiefly in view; and, although anxious to reduce the amount of pensionary allowances which the State has to pay to the minimum sum possible, they do not appear to have been prepared to sacrifice the efficiency of the public service at the altar of economy. It will be seen from the above extract that distinct provision has been made for those special cases or appointments in which it is for the interest of Government to select the most efficient individuals irrespective of any age they may have attained.

If there is any particular class of appointments to which this exceptional clause is especially applicable, it is the higher classes of medical appointments open to the students of the Indian Medical Schools—the posts held by the Assistant Surgeons. According to the rules of the Calcutta University, which have come into force with the sanction of the Government of India, the candidates for the Entrance Examination must be above the age of sixteen years on the 1st March following their admission to that Examination; and as, under the recent arrangements, they must pass the First Examination in Arts before commencing their Medical studies, (which cannot be done until after the prosecution of a regular course of study in some affiliated institution for not less than two academical years after passing the Entrance Examination), and thereafter carry on the latter studies for at least five years, no candidate can, even under the most favorable circumstances, qualify himself for the appointment of Assistant Surgeon, until he is above twenty-three years of age. But if any one, before commencing his medical studies, wishes to obtain the degree of B.A. for which two years' further study is absolutely necessary, he must be above twenty-five years of age, before he can qualify himself for such an appointment.

We have explained in a previous issue of this Journal, the character and quality of the general education necessary in a student of medicine before he commences his professional study. It will be seen at once from a consideration of the facts and arguments therein brought forward, that the holders of the B. A. degree are in a far better position to profit by their medical studies than those who have merely passed the First Examination in Arts, so that in the general run the former will make better Physicians and Surgeons than the latter. And we have already shown that, under the present arrangements of our University, this better class of graduates in Medicine must be above twenty-five years of age, before they can be in a position to enter the public service. Sir Richard Temple, our present Lieutenant Governor, has however extended to the Medical service,—from what motive it is not possible for us to divine,—the order about the maximum age for admission into the public service. The effect of this extension will therefore be to debar our best future graduates in Medicine from entering the public service. The defective general education of the majority of our Medical practitioners brought up under the old regulations, which have happily been superseded by better ones, is pretty well known, and recently came into prominent notice in connection with the prize offered by Lord Northbrook for the best Essay on the Epidemic Fever now raging in Lower Bengal. It is true that all of those, who could compete, did not compete, owing to the shortness of time allowed and other conditions which we commented upon at the time (in our number for July and August 1872,) but the fact that none of the papers, that were submitted in two successive years, have been deemed worthy of the prize by the adjudicating committee is a sad proof of the correctness of our statement. The present rules of the Calcutta University, noticed above, are calculated to remove the defect we are complaining of to a certain extent, and will doubtless be the means of supplying the public with a better class of Assistant Surgeons; and we had every hope that this laudable attempt of the University would have been met with warm support from the Lieutenant Governor of these Provinces. But we have been disappointed to find that the very reverse has been the case.

It is hardly necessary to state that hospitals and dispensaries are the best and most appropriate places for practitioners to improve in professional knowledge, to observe the character and progress of diseases by the bed-side of patients, and watch the actions of medicines, in disease as well as in health. But in this country the appointment of Medical Officers to take charge of Hospitals and Dispensaries rests almost entirely with Government. So that medical men holding public service have alone the best opportunities to improve in professional acquirements. There is therefore the greater necessity in this country, in filling up the appointments of the Assistant Surgeons, to keep the field of selection as wide as possible, so that there may be no obstacle to the best graduates of the Indian Medical Schools to entering the public service. But the tendency of Sir Richard Temple's order under notice is in the contrary direction.

We have shewn above that under the most favorable circumstances, no student of Medicine can be qualified to hold the rank of Assistant Surgeon before his twenty-third year. But if he happens to complete his sixteenth year immediately after the 1st March, and becomes unable from accidental causes to appear at one of the four examinations which he must pass before his admission to the Medical Service, a contingency which does sometimes happen even with the best students, he must exceed his twenty-fifth year before passing the final examination, and will thus altogether be precluded from entering the Government service under the recent ruling of Sir Richard Temple.

There is yet another consideration which ought to have great weight with a local Indian Government in deciding a question like the present. The maximum age at which candidates can appear for the Medical Covenanted Service is 28. They have to pass examination in the following subjects :—Anatomy and Physiology, Surgery and Medicine including Therapeutics, the Diseases of Women and Children, Chemistry and Pharmacy and a practical knowledge of drugs. The examination in Medicine and Surgery is in part practical, and includes operations on the dead body, the application of surgical apparatus and the examination of medical and surgical patients at the bed-side. Besides the above there are the following optional subjects,—French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography and Botany, with special reference to Materia Medica. The candidates for the post of Assistant Surgeon, have to pass two examinations—the *First,* in Descriptive and Surgical Anatomy, Chemistry (including Practical Chemistry so far as regards the testing of the presence and nature of ordinary poisons and the examination of animal secretions and urinary deposits), Botany, Materia Medica, Pharmacy, General Anatomy and Physiology, and Comparative Anatomy and Zoology; and the *Second,* in Principles and Practice of Medicine and Surgery, Ophthalmic Medicine and Surgery, Midwifery, Medical Jurisprudence and Practical Toxicology,—besides practical examination in the wards of a hospital, which includes operations upon the dead subject and the examination of morbid products, chemically and by the aid of the microscope. The examination in Comparative Anatomy and Zoology has to be passed only by those Candidates who wish to obtain the degree of Bachelor in Medicine. It will thus be seen that the professional subjects embraced in the two examinations are the same, and as candidates up to the twenty-eighth year of age can be admitted to the former examination which takes place in England, it is for Sir Richard Temple to see whether his order, which practically excludes from the post of Assistant Surgeon, those graduates of Medical Institutions who are above twenty-five years of age, does not require some modification so as to admit at least those who are between twenty-six and twenty-eight years of age.

Should Sir Richard be unwilling, however, on the score of so-called economy, to do what have been recommended above, there is another alternative to which we beg to invite his attention. It will be seen from the statements made before, that the regulation of the Calcutta University, which opposes the chief obstacle to a medical student's passing the second examination in medicine and surgery before completing his twenty-fifth year is the regulation which requires a candidate for the Entrance Examination to be above the age of sixteen years. This regulation appears to have been adopted from the regulation of the University of London, in which a similar practice exists. It is not our business at present to enquire into the reasons which induced the senate of the London University to lay down the regulation in question. But there is so much difference in the subjects of examination in the two Universities, that the rule regarding the restriction of the age of candidates for examination of the one cannot be applicable to those of the other. In the London University the candidates for the matriculation examination have to pass in four languages, namely, Greek, Latin, English, and French or German. In the Calcutta University the candidates have to pass in two languages only. Again, in addition to the subjects common to the two Universities, the candidates in

London have to pass in Natural Philosophy and Chemistry. The course of study for the matriculation examination demands a considerably longer time than that prescribed for the Entrance Examination of the Calcutta University. The minimum age for the latter, ought therefore to be lower than the minimum age prescribed for the former.

But what this minimum is to be? The University has fixed no maximum age above which candidates are not allowed to matriculate. Consistently it ought not to have fixed the minimum age. We are not aware of the reasons which guided the University to have fixed a minimum at the same time that it has not fixed the maximum. All that we can imagine can be said in favor of the latter course is that the door of learning should not be shut to the advanced in years. And we cannot imagine any thing that can be said in favor of the former course except that the University must deem it one of its functions to prevent in the youth of this country precocity of development. Admitting that precocity is an abnormal condition, and is, therefore, to be looked upon in the light of as great an evil almost as its opposite idiotcy, where, it may be asked, is the line of demarkation to be drawn between precocious and normal development of the psychical powers? Biography is the only means whereby any conclusion can be arrived at on the subject; but biography does not help much in leading to a definite conclusion, in enabling us to draw a sharp line. So far as it does help, it enables us to assert with confidence that the University minimum is a most arbitrary and preposterous one. In our opinion, 14 would be the fairest minimum, and the maximum need not exceed 20. Intelligent boys should not be made to lose time, whereas indulgence should not be shown to old stupid boys who fail to pass the entrance up to the advanced age of twenty, and become nuisances of our schools and colleges.

THE TREATMENT OF DISEASE IN RURAL BENGAL.

(Communicated.)

Nothing can be more in keeping with the belief of the people of this country in the decrees of fate than the mythological anecdote which makes Bramha reconcile Yama to his disagreeable duties by saying that he would ordain that mortals would ascribe to some disease or other the work assigned to the God of Death. But notwithstanding the general belief in predestination in the matter of the duration of man's life, the treatment of the sick has been always regarded as a sacred duty, and the sins of a person who has not had the benefit of some medical treatment in his last illness are reckoned to be beyond all hope of expiation. We have seen cases in which, although love of life and the instinct of self-preservation were weak, this religious sanction prevailed over other considerations and prevented untimely death. The Kaviraj was therefore an essential element in the village community and the respect, enjoined to be shown to him by all, not excepting even Brahmans, placed him in a social position far above that enjoyed by physicians in any other country. Before practitioners of other creeds came to the field, and while the Hindu system of medicine enjoyed the entire confidence of the rural public, the Kaviraj fully understood the responsibility of his vocation. "He who practises medicine without the necessary preliminary training under a competent professor is a murderer and not a physician," was about the first precept he was taught by his books. Not only had he to make himself familiar with the standard works on poetry and philosophy in the language, not only had he to store his mind with medical learning in all its branches, but even when his studentship was over, he could not set up in independent practice without first serving apprenticeship for several years to his preceptor or some other practising physician. One of the chief difficulties in the way of an honest and successful practice of the Hindu system of medicine was the enormous expenditure involved in the preparation of several medicines. The case of a Kaviraj rich enough to prepare all the important medicines on his own account was rare, while by far the largest number of patients were too poor to pay for such preparations. But the difficulty was got over in a preculiarly Hindu fashion. There were never wanting wealthy men ready to pay for the preparation of expensive medicines, and to place them at the disposal of the Kaviraj of the village for distribution gratis among his poor neighbours. Self-interest rendered this benevolent work all the more useful. Exception might have been taken to the genuineness of the medicines if they were prepared solely for the poor, but as most of these medicines were originally prepared for the benefit of the members of the rich man's family, the utmost care was taken as to the quality of the ingredients and the mode of preparation. No one man was expected to have all the important medicines prepared under his care; one rich man or rather the Kaviraj whom he patronised was known for the possession of fever pills, another for medicinal oils, a third for electuaries and so on. Whenever a case occurred in one village which baffled ordinary drugs and required for its cure a medicine which was in the possession of a Kaviraj of another village, the latter did not hesitate to give the requisite medicine, well knowing that he could hope for a similar accommodation in his turn. There was then, therefore, less of the "commercial spirit" than at present in the treatment of disease, and the Kaviraj could in a manner count upon the co-operation of the entire community in his good work. It is a significant fact in the history of medicine that, in spite of the ease with which the mantle of the physician could be usurped as it has been usurped in other countries, in spite of the absence of all legislative restriction in the matter of a man's setting himself up as a physician, and in spite of the pecuniary temptations which this legally irresponsible profession held out to the needy, the character and qualifications of the rural Kavirajs were as they should be, and that public opinion was strong enough to restrict the number of quack Kavirajs to a minimum.

.The Kaviraj was however not the sole guardian of the health of the community. He had his coadjutors in the barber, the house-wife and the charmer. Each of these had a separate sphere of action in which they jealously maintained their authority and brooked no interference from others. In former times the barber everywhere performed the duties of the village surgeon, but while in other countries the two functions have become gradually separated from one another, they are still combined in the same person in rural Bengal. Hindu medicine allows fewer occasions for the use of the lancet than most other systems; but although the functions of the village surgeon were on that account comparatively not very onerous and his means and appliances were not of the best description, he possessed considerable skill in this branch of his profession, and not the least among his many recommendations for the exercise of his craft lay in his knowledge of the healing properties of herbs.

The house-wife had no less important duties to perform in the domain of medicine. She had charge of the treatment of all infantile diseases and a few of the diseases peculiar to women. A knowledge of such treatment was as much necessary to a good house-wife as cookery or any other domestic art, and it was transmitted from the older to the younger members of a family, and from one generation to another, by precept and practice. By a judicious administration of juices, infusions or decoctions of single herbs or a combination of herbs, she was enabled to cope with most of the diseases of children, and in difficult cases she called in the aid of house-wifes more experienced than herself, but a sick child below the age of 8 or 10 years was scarcely ever placed in the first instance in the hands of the Kaviraj. In diseases peculiar to women, specially those of the lying-in-room, the services of a good house-wife were of incalculable value. Her importance might be imagined from the extent of the demand for women-doctors which is now felt in every civilised country, and her necessity determined by the apprehension so justly entertained that most of the organic diseases of women are attributable to a bashful evasion of the doctor in the first stages of disease and to defective disclosure of symptoms after diseases have been fully developed. The peculiar training, which a Bengali house-wife received by precept and example in the treatment of the diseases of women and children, should exonerate her from the charge of lay doctoring, and she had an additional extenuation for her practice in the simplicity of the herbs in which she had to deal, which, thanks to the wisdom of the original selection, could act only as specific remedial agents and never as poisons, however large might have been the dose. Accidents caused by the use of a wrong medicine or a formidable dose are unquestionably of recent occurrence in this country.

The charmer's sphere of treatment was confined within the narrow limits of certain nervous diseases of women and children. It was in cases of epilepsy, dementia, chorea, hysteria, infantile convulsions and the like that his services were deemed indispensable. Modern science has recognised the efficacy of electro-magnetism as a powerful remedial agent, and if we credit the spirit charmers with the possession of the secrets of mesmerism, we can account for the success which attended their treatment of these diseases. The process they adopted in charming away diseases closely resembled the action of modern mesmerisers, and we have the authority of Dr. Esdaile for the statement that several of the spirit charmers of Bengal possessed the mesmeric power and cultivated it to a high degree.

The inoculator could hardly claim a place among the regular practitioners of medicine. The brilliant success, which vaccination has achieved in countries where no other system of affording protection against the small pox was known, has thrown the Indian system wholly into the shade. It has even induced legislators to travel out of their way, and to interdict under a penal sanction not only the practice of the system but also the liberty of the subject to choose between the two systems, although the result of the observations regarding their relative values has been declared to be still uncertain. The very principle on which the success of vaccination is based might, however, strike one as an additional argument in favor of inoculation. Scientific men at least have not hesitated to adopt the principle of inoculation in suggesting protective measures against certain contagious diseases.

Our list of rural medical practitioners would be incomplete if we omitted to notice, if only to mention, the Mals, the Badeahs and the vendors of panacea. The Mal was the eye-doctor of the village. He removed cataracts by puncture and depression, cured bright eyes by the application of vegetable drops and ointments, and was really a useful member of society in his way. His position as such was recognised by rural public opinion. Not so, however, was the position of the Badeah who professed to cure gout and rheumatism by the barbarous method of making a puncture in a vein in the affected part and sucking out a few ounces of blood by the mouth, nor that of the panacea vendors who periodically came to the village from distant parts of the country, sold innocuous powders and oils to the weak and the credulous, and did not think of imposing upon their victims a second time until they had allowed a sufficient interval to pass to render a recognition of their features difficult.

Pilgrimages to sanctified places, such as Tarakeswar and Ghospara, and vigils and fasts at the shrines of idols, were the last resource in obstinate and chronic cases of illness. The reputation of these shrines has been maintained by occasional cures from obvious causes, while all cases of failure have been attributed to the sins of the unfortunate patients themselves.

Such were the means and appliances for the treatment of diseases in our villages even long after European medicine had established a firm footing in our cities and towns. Reports of remarkable cures under the new system gradually spread into the country, and led those who could afford the means to avail themselves of the services of English and English-trained doctors in diseases occurring in their families. The novelty of the treatment, the favorable contrast which its liberal system of diet presented to the prospect of continued fasts under the orthodox system, the rapidity with which cures were effected in certain cases, and the pompous struggle which the doctor waged with disease in the shape of blistering, bleeding, purging and stimulating the patient by turns before he gave him up, instead of allowing him to die quietly as the Kavirajs did, gave a charm to the system which the poor villagers were unable to resist. The Kavirajs were placed at a discount while the new system met with popular favor. The demand thus created gradually drew large number of practitioners of European medicine into the villages in the mufussil, and every outbreak of cholera or fever to a noticeable extent in any locality, increased their numbers. The visitation of the terrible epidemic, which has been decimating the population of hundreds of villages during the last 15 years, opened the widest door for the rush of these medical adventurers into the mufussil. Dismissed native doctors, medical students who had been unable to complete their term on account of poverty or of eviction from school for misconduct, and, worse still, apprentices and compounders who had served for a few years in some hospital or apothecary's shop, flocked into the affected villages. With small stores of rejected medicines for their armoury, with tales of wonders achieved in other villages, and with assurances of certain cure even in incurable cases, they preyed for years upon the health and the purses of the rural population. The poor people, in their anxiety to save those who were near and dear to them, and who were perhaps the main stay of their families, did not hesitate to part with all they had to pay for medical aid and medicine. Repeated failures were at first attributed to the virulent character of the disease, which was known to have baffled the skill of European doctors, the temporary suppression of certain symptoms were extolled into cures, and large expectations were held out regarding future cases. The experience of a few years, however, opened the eyes of the people to the real character of these medical practitioners, and the numerous cases of mercurial stomatitis, splenitis and chronic fever which resulted from their injudicious and wanton use of powerful drugs, soon convinced the people that the remedy was worse than the disease. The faults of the practitioners were believed to be faults of the system, and a general scepticism succeeded the faith of previous years. The Dhangars appear to have had bitter experience of these men. Those of their class who take English medicines and submit themselves to English treatment, have to pay for the heresy while living, by excommunication, whilst after death their polluted bodies are denied the last rites of religion. It was after the mischief had been completed that government was aroused to do its duty to suffering humanity. Hospitals were established at the centres of affected localities, native Asst. Surgeons and diplomaed native doctors were stationed at covenient distances from one another, the work of supervision was strictly enforced, and medicines were offered for sale at cost price to landholders and others who might want them for the benefit of their tenantry and poor neighbours. The public officers were however astonished at the apathy displayed by all classes of people in taking advantage of the liberality of government; the medicines offered for sale had to be returned to government depots unsold, the hospitals had to be abolished one after another as the people did not conceal their dread to be admitted as indoor patients, while medical advice and medicines were taken more in the light of obligations conferred on the doctors than as charities received by themselves.

The scepticism which has thus seized the minds of the people in the matter of the state system of treatment in diseases, is to be deplored on more than one account. It has on the one hand deprived competent doctors of all chance of establishing themselves in the villages with any hope of securing a successful practice, while on the other hand the short-lived encouragement given to the so-called practitioners of European medicine, has driven the Kavirajs from the field, and compelled numbers of them to seek livelihood in other occupations. The long established rules of morality of the sick-room have been rudely shaken. Habits of patient endurance in disease have been replaced by an unhealthy desire for rapid cures, fasts have become repugnant to all, and the relations of a sick man are not regarded as having sufficient feeling for him unless they change the physician at least once a week. Happily, people have begun to perceive that their own system of medicine was not so bad after all, and the Kavirajs have already regained a portion of their lost ground; but the utter disfavor which they met with, and their consequent inaction for a number of years, have done mischief to a lamentable extent. With a few honorable exceptions the present generation of village Kavirajs has fallen off considerably from the position occupied by their predecessors. The few Kavirajs of the old *regime*, who have outlived the epidemic and the ravages of time, have been obliged to compromise their principles and to regulate their practice to suit the altered tastes and habits of their patients, while most of those who have newly joined their ranks, are wholly wanting in the training and acquirements necessary to their profession. By their ignorance of the first principles of therapeutics and of the very language of our medical literature, they are bringing discredit on a noble system. Boarding school masters in England in the days of Nicholas Nikleby or medical practitioners in the days of Oliver Goldsmith did not require training or qualification of a higher order than is possessed by village Kavirajs of the present day. The profession of medicine has, in fact, become the last resource of men who have been unsuccessful in other occupations, and it is not difficult to foresee the fate that awaits the Hindu system of medicine in their hands. While government has been always anxious to adjudicate disputed rights of property according to the dicta of the Hindu law, while it is so very liberal in the encouragement it gives to the cultivation of ancient Hindu literature, it strikes those who wish well of the Bengal rural community that it might profitably to itself and to that community devote a portion of the amount which is spent on a foreign and expensive system of medicine to the encouragement of a system for which the people have the greatest veneration and which has elicited the highest admiration from all foreigners who have taken the pains to study it.

THE EPIDEMIC FEVERS OF BENGAL.

By Assistant Surgeon Unnada Charan Kastagiri,
Civil Medical Officer, Chittagong.

These Fevers, from the course they run and the sequelæ with which they are followed, are essentially what are commonly known as malarious fever. The stages of the fever may succeed each other in a regular way, or these may be reversed as to time, or one or more may be altogether absent. The 1st or cold stage may often resemble an attack of cholera, being ushered in with vomiting and purging, and ending fatally before the remaining stages have developed themselves; or the cold stage may come last, attended or followed by collapse, or it may be altogether absent. The 2nd or the hot stage, may be short, or prolonged for hours, and days, it may be attended with raving and delirium, or by stupor, and coma, which may be followed by death, or the heart may fail in its action from excessive pyrexia, leading to fatal syncope. The 3rd or the stage of sweating may be absent, or the perspiration may be excessive, causing great debility, which again may be followed by collapse, and final dissolution. The sequelæ of the epidemic fevers is same as that of the common malarious fever, viz., enlargement of the spleen, or liver, or of both, dropsy, diarrhœa, dysentery, bleeding from the nose or mouth, sloughing of the lips, and cheeks, &c., &c. The enlargement of the spleen is the most common result of malarious poisoning, and the least serious in its effect.

These fevers are due, in my humble opinion, to exhalation of malaria at certain periods of the year, or during a succession of years, from excessive moisture of the soil or subsoil, close to human habitations. The *moisture* is caused by obstruction to the water-courses, or natural drainages of villages by Bunds, Embankments, or the Railway Lines. Silting of rivers either at their points of origin, course, or termination also gives rise to malaria, and its effect the out-break of fever is either Endemic or Epidemic, and of a slight or severe nature, according as the obstruction is permanent, temporary or periodic, and also as the particular soil is more or less retentive of moisture, and the solar heat is slight or severe in degree. In other words, the generation of malaria or the fever-poison of Bengal is in direct proportion to the moisture of the soil, and the atmospheric temperature, or solar heat causing its evolution from the said soil.* The so-called epidemic fever of Burdwan and Hooghly has been raging for upwards of 10 years on both sides of the river

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* Dr. Fergusson, in his Report of Epidemic Fever of Rosandool in South Holland, considers malaria to be an exhalation from the soil.

Hooghly and in other places. Since 1868, it has appeared in Burdwan, and Hooghly, and latterly in Midnapoor also.

FEVER IN BURDWAN.

In 1869 it broke out with virulence in the town of Burdwan, but towards the end of the year, its severity was very much abated. In 1871 the fever again broke out at the Burdwan Station. It also raged in Hooghly, but there it was not so fatal, or general. Dr. Elliot, Civil Surgeon of Burdwan, reported that a large proportion of the population suffered from the sequelæ, "more harassing than the disease itself," viz., enlargement of the spleen and liver, dysentery, diarrhœa, and œdema of feet. In new fevers, as at Maháchanda, congestion of the brain, liver, and spleen were the prominent complications.

In Sub-division Bood Bood at Mohata, and Ausgram, three-fourths of the population were suffering.

In South Burdwan, including Thannas Roynah and Khondghose, the fever was most generally prevalent. In Mongalcote and other places of the Cutwa Sub-division, there was great sickness and distress.

It is stated that nine dispensaries were set up for the treatment of "*endemic* fever of Burdwan" of which four were within the Municipal limits.

From the last para. it is clear, that the so-called epidemic fever of Burdwan was properly speaking endemic in its nature; i. e., its cause was not removable, but permanent, and in the *soil*.

It is reported, that owing to prostration from long and severe sickness, the mass of the village population were unable to obtain proper medical relief, and if obtained, the result was unsatisfactory, which depressed and disheartened them.

Considering that the cause of the fever, the unceasing generation of malaria, was a permanent evil in the district, it is but natural that the general result of the medical treatment should be unsatisfactory also.

The Deputy Surgeon-General, in his report of the Burdwan epidemic fever, alluded to the increase of sickness from *November*, which is *just the time*, after the rains, when exhalations from the earth are abundant.

In Maháchanda, eight miles from the town of Burdwan, one hundred persons died out of a population of six hundred, within two months (November and December).

The poorer class is said to have suffered most severely, for with distress and privation, the incidence of the fever was serious, rallying without food and clothing being an impossibility, while the generation of malaria was unremitting.

In 1868-69, in and about the Burdwan Station, every poor person was a victim to the attack of the fever; a great many died, and those, who recovered, suffered again and again. In 1869-70 fever again broke out after the rains, as in other parts of Bengal. Want of proper food and proper clothing acted as predisposing causes, and delayed or prevented permanent cures.

In Chuckdighee, 15 miles south of the Mymaree Station, and in the villages of Jote Sreerampoor, Sreekistopoor, and Rajarampoor, on the western Bank of the Damoodur, the fever raged severely, two-thirds of the population falling victims to it. The ravages of the fever at Selimabad, and other places along the banks of the Damoodur, and the villages within Thanna Royna, were reported by the Magistrate, towards the end of December. The villages Moshogaria, Salda, Ajapoor, Chota Bainean, Bara Bainean, and Nursingpoor, suffered severely for 3 years continuously, after which they were nearly restored to their original healthy condition. This was no doubt owing to the re-establishment of natural drainages, the water having cut its own way out.

Selimabad and the adjoining villages were said to be very low and dirty, and the drinking water abominable.

The mortality in the villages of Sreekistopoor and Jote Joyrampoor is given at two-thirds of the population. In one house 33 persons out of 40 succumbed to the disease.

The epidemic then abated on the eastern bank of the Damoodur, and began to rage very severely on the western bank, in the villages Sreekistopoor, Rajarampoor, Adampoor, &c., lying along the banks of the river, on a somewhat high strip of land. To their west, lies the low open country, which has much to do with the fever, as will be shown hereafter.

Dr. Payne visited several places at short distances from the Sudder Station of Burdwan, and reported that a fatal fever has had, of late years, become *endemic*, with *seasonal out-breaks* of extreme severity, over a large tract of the country formerly healthy, and which was owing to some change gradually at work, in the physical condition ; such as the gradual conversion of a well drained and healthy tract to the condition of fens or swamps. This is said to have been caused by some water course, formerly navigable by large boats, becoming gradually shallow, and filled up, the evil being greatly accelerated by the embankment of the river Damoodur, causing obstruction to the drainage of villages.

Mr. Lane, the officiating Commissioner, reported the general decrease of the fever in August 1872. This was most probably owing to the re-establishment of natural drainages by the hydraulic force of the monsoon or rain water. Here I need only allude to Dr. Payne's opinion of the Epidemic fever. He also calls it *Endemic fever* characterised with seasonal (after rain) out-breaks of extreme severity, a *state of things*, which is more or less prevalent in all the sickly districts of Bengal.

Mr. Lane reported that one tract, viz., from Kalkapoor on the north of the river Adjai, through the Police Station of Kaksah down to the southern limit of Pergunnah Shonamookhee, was entirely free from fever. This tract is coincident with a gradual rise in the level of the soil from it, westward to the level of Ramgunge. The tract, thus free from fever, was nearly 500 square miles. He also reported of the eastern side of the Mongalcote circle being nearly free from fever. Mr. Lane also stated in his report that the three circles Burdwan, Jehanabad, and Bood-Bood, were very low, and communication difficult, and that he received reports of much sickness in June 1872 in the villages of Denonathpoor and Powgram near the Bhadia Railway Station, and in villages Shur, Bhorn, Kalekole, and Kaunoo, near the Junction Railway station. Towards December 1872, the disease abated in the Burdwan station. At Culna and Cutwah, it was a thing of the past. Fever was still lingering in the immediate vicinity of Burdwan.

The Civil Surgeon, in his Burdwan Fever Report of May 1873, spoke of the decrease of fever everywhere, with the exception of one or two places. In the report of the 2nd half of May, it is stated that the rain at the beginning of the month, led to a marked abatement of the fever, but the improvement was *short-lived*, the *increase of fever* was observed with the *increase of temperature.*

Assistant Surgeon Dina Bandhu Dutt, in his inspection report, stated that a rain-fall, however scanty in March and April, both hot months, was followed by increase of fever. Then again he reported of the decrease of fever since the rains in May, and with the decrease of temperature. In April he found a good deal of continued fever; and with the rise of temperature after rain-fall, an aggravation of fever was invariably marked by him.

These facts very much support the view that malaria is the result of the combined action of the soil, heat and moisture.

Dr. Dutt of the Burdwan circle gave his opinion, that obstructed drainage and a water-logged subsoil were the causes of the Burdwan Epidemic. Navigable Khals have been converted into a number of isolated tanks, main drains were obstructed, and out-breaks of fever were simultaneous with these obstructions. A sketch map in support of his opinion was submitted with his report.

FEVER IN HOOGHLY.

In December 1871, the Magistrate of Hooghly reported the Epidemic Fever to have broken out throughout the district since October last; the usual time for the breaking out of the disease in other parts of Bengal.

In Thanna Hooghly old fever with spleen were said to be prevalent. In Thanna Bansbariah there were old, as well as new cases; deaths few. In Pandooah old fever was very prevalent. In Balaghar new attacks were many, and some proved fatal. This is accounted for by the inundation which preceded the outbreak. In Baidyabati, Krishnanagar, and Harripal, fever was much prevalent.

In subdivision Jehanabad there was much sickness, nearly all the villages suffered. In Goghat fever was mostly old, though many deaths were caused.

The fever decreased towards December 1871 in Thannas Balaghor, Pandooah, part of Dhoniakhali, Nawasoria, Dharmadaha, Somrah, Sreepoor, Gooptipara, Ichapoor, Bainchee, Obherampoor, Bhastara, &c.

Sanitary Commissioner Dr. Payne reported on the 30th December 1871 of the decline of the disease in Hooghly, both in the station and in the interior of the district, with the exception of Jehanabad. The fever is reported to have been less fatal than that of 1869. The usual sequelæ of the fever were said to be enlarged spleen, dropsical limbs, and bloodlessness. Several places severely visited before, such as Pandooah, escaped this time. In 1869, the disease was reported to have infested the banks of khals, more than it did before.

Dr. Payne observed "the most perfect cleanliness" both in the Hooghly and Burdwan Sudder stations.

The Commissioner of Burdwàn, in his report of Hooghly for 1871, stated that the disease first visited large villages in the east of the district, and gradually extended westward. It diminished after the fair setting in of the cold weather, with the exception of two principal localities, the first being the central portion of the tract, which lies between the Hooghly and the Damoodar rivers, extending from Dhoniakhali to Krishnanagar, and Juggut Ballabpoor; and the 2nd, the tract which borders on both sides of Dwarkesshwar river. The first is a low country, traversed by sluggish and partially closed rivers, and the second, an open low sandy tract.

FEVER IN BEERBHOOM.

Fever was reported to be most severe in this district, on its south-east side along the river Adjai.

The Magistrate of Beerbhoom, in his Report on the Epidemic Fever, divides the district, in reference to the nature of the soil, as follows :—

1. *Laterite* high land, containing 2200 square miles, having a population of 250 to the square mile.
2. *Littoral*, containing 2000 square miles, having a population of 550 to the square mile.

3. *Alluvial,* containing 1000 square miles, having 1150 persons to the square mile. In certain parts of this latter most densely populated portion, the fever had spread, which the Civil Surgeon Dr. Mathews described as having deflected from its more natural line of progress from Hooghly and Jehanabad westward, towards a southerly and south-westerly direction, preferring the alluvial soil, and more particularly the depressed valley in the centre of it.

In May 1873, Dr. Mathews reported that the quarters of the Midnapoor district, that *escaped* fever during the past season, were those the soil of which was laterite, and the country forming the sea-board. The fever had a marked preference for the low-lying non-littoral alluvial country.

He was moreover of opinion, that Government Embankments along the river Selye and Cossye, and zemindars' embankments, in all conceivable directions, obstructed the drainage of the country to a very serious extent. The sluicing arrangements were also very deficient, they were very few in number, defective in construction, and out of repairs, allowing surface drainage only, their floors in many instances being above the level of the country.

From the above description, it is clear that the fever poison was not exported, or wafted, from the adjoining districts of Hooghly or Burdwan, but that it had its origin in certain descriptions of the soil, which was the same as other fever-poison-generating tracts of Bengal. Most probably the evil unnoticed was prevalent for years, and that proper attention is being directed to it when the border districts were being stricken down by the fever.

In the foregoing remarks on the progress of the recent Epidemic fever, I have noticed only such points, as are likely to be of help in the investigation of the cause of the fever. I myself had frequent opportunities of visiting Burdwan and Hooghly, while the epidemic was still raging, and can bear personal testimony to some of the facts summed up before, to which I hope to advert in a future part of this essay.

Now of other out-breaks of prior dates. For this, it is necessary to give *separately,* short accounts of some of the fevers which broke out at different times in different localities in Bengal, and to find out if one and the same cause, acting in different degrees, and under varied circumstances, has not given rise to differences in the intensity, time, and duration of the out-breaks :—

1. *The Mahámári, or Plague of Gour.*

From the great mortality attending the out-break of this fever, it was known in olden times by the significant name of *Máhamári,* literally meaning "*great mortality.*" It led to the final desertion, and ruin of Gour, the seat of Government of a succession of one hundred Hindu and Mahomedan Governors. While at Maldah I had opportunities of consulting some old Persian manuscripts, and although the accounts given therein are imperfect or incomplete, they are sufficient to identify the plague with the epidemic fever of the present day. The disease broke out in 1575, and in the course of four or five weeks, the renowned capital of Bengal was prostrated at its feet. The Governor himself with some of his relatives fell victims to it. There was a universal panic of imminent and immediate danger to life, the citizens therefore commenced to fly in all directions, and in a short time, it was completely depopulated. Now it may be asked, what was the cause of this epidemic?

The Ganges, now some miles away from the ruins of Gour, formerly washed the very walls of the great city. But a natural process of silting up commenced, and the river gradually receded, and caused much sickness in the city and its suburbs. The process of filling up was so uninterrupted and rapid that village after village sprang up on the old bed of the river; and now nearly one hundred villages separate the ruins of old Gour from the present bed of the river. But the real calamity of the city had not yet begun, there was nothing unusual in the type or virulence of the attacks of the fever, until one of its Mahomedan Rulers committed a serious blunder against the laws of sanitation, for in order to protect the city from the inundations of the Ganges, he constructed strong additional embankments, which, while it kept off the inundation on the out side, completely obstructed the drainage of the city from the inside, and the most virulent outbreak of epidemic fever or plague, after the rains, was the inevitable consequence—a fever which baffled all human skill of the age, and the people could do nothing better than desert the city to save their lives.

2. *Fever in Arracan.*

With regard to unhealthiness, certain parts of Arracan are compared to the deadly *Nepaul Terai.* Its rice fields were so many swamps between the hills; the soil, being a mixture of sand and clay, is very retentive of moisture, even in the hot months of April and May. Rice grows here in great abundance without any previous preparation of the land. After a few showers, the paddy is simply scattered on the soft and muddy soil, which in due season, yields a good harvest. The native mughs, and the Burmese settlers, conscious of the extreme danger of sleeping on the moist ground, make high bamboo *Machangs,* or raised platforms, on which they not only sleep during the night, but also carry on their usual domestic works by the day. The Bengalee coolees, who first flocked into the district for employ, died away by hundreds simply for sleeping on the ground inside their temporarily raised sheds, a habit which they were used to in the comparatively drier climate of their mother land. The exemption enjoyed by the natives of Arracan, from attacks of fever can only be explained by the circumstance that sleeping on well-raised bamboo or plank-foors or platforms, they breathed much purer and drier atmosphere than the Bengalee coolies who slept on beds of straw spread on the ground, and from the fact that during the hours of sleep, the system is most susceptible of external influences. In the case of the coolies in question the subtle poison of Malaria must have been imbibed through the respiratory as well as through the integumentary system.

Akyab, the Sudder Station of Arracan, jutting out into the Bay of Bengal on its south and west, was so healthy when it was first wrested from the Burmese, that invalid officers were sent there to recruit their lost health. Latterly with the improvement of the station by roads and embankment, without regard to its drainages, the climate became deteriorated, and fever of a severe type broke out and became endemic for some years, until natural drainages were re-established either by the force of the obstructed water, or by the settling down gradually of the roads themselves.

Fever reappeared in the station, after Mr Peterson, a barrister of the old Supreme Court of Calcutta, had commenced the improvement of his coconut plantation, on the south-west of the station, on the sea-side by the construction of embankments or dams across the mouths of the numerous creeks which watered the plantation. The drainage being thus obstructed, was followed by a severe out-break of fever. The natives and the Europeans, living in houses with raised bamboo or plank-floors, generally escaped, but the poor Bengalees for their absurd habit of sleeping on the ground were especially marked out for its victims; but, as usual, the climate again improved, as the drainages were gradually re-established.

3. *Fever in Chittagong.*

Chittagong, alias *Islamabad,* was formerly one of the healthiest stations in Bengal, so much so, that no less a personage than Sir William Jones, selected it as the place of his residence in Bengal. The deterioration of its climate dates with the commencement of the silting up of the river *Karnafoolee* passing by the station. Miles and miles of new alluvial soil have since sprung up, and while it is breaking down on one side, it is filling up on the other, and the climate is getting proportionately unhealthy. Chittagong being within the tidal ranges, spring-tides completely drown the *chars* both during the full and the new moon, i. e., twice every month, and on the receding of the water, they are again exposed to strong solar heat, causing excessive exhalation of malaria or fever-poison at those periods, attended with proportionate increase in the prevalence, and intensity of the fever. Villages, beyond these influences, are healthy ; at all events, their salubrity is not below the average of villages in other parts of Bengal.

The Sudder Station of Chittagong, having the river *Karnafoolee* on the east and south, and hills continuous with the Tippera range on the north and west, is possessed of good natural drainages. The station itself is interspersed with beautiful small hillocks or *tillás*, on the tops of which brick buildings are built both for Government officers and for residences of well-to-do Europeans and Eurasians. Notwithstanding all these natural advantages, fever, of late years, has become endemic in the station, and as I have stated before, it can only be accounted for by the formation of *chars* in the river on its east and south.

Besides its endemic prevalence, a severe out-break of fever takes place after the rains, and a still more severe one, during the hot weather. The first has its origin in the moisture of the ground throughout the whole district from the late rains ; the 2nd or hot weather, fever is confined to places within the tidal ranges ; while therefore the former is more universal in its prevalence, the latter is more virulent in its attacks, often assuming the nature of low typhoid fever. This is owing to strong solar heat acting on the excessively saturated alluvial soil, causing excessive generation of the fever-poison, the effect on human constitution being proportionately severe.

A fever, called *Bari-jwar,* a corruption of the Bengalee term *Bhári-jwar,* literally meaning strong fever, attacking persons on or about the full or the new moon, is very prevalent here, and, in fact, everywhere within the influence of the tides. In Calcutta and the adjacent districts, it is commonly known by the name *Bátsheerá-jwar* ; and in Dacca and other eastern districts, by *Ekesheera-jawr* or shote-jwar. Coming fortnightly with the full and the new moon, it is also called *lunar* fever, but as the spring tides, during those periods, by wetting extensive surfaces of the dry soil, give fresh impetus to abundant generation of the fever-poison, and thereby act as the direct cause of the fever, the term tidal-fever would be more appropriate, and significant of its origin.*

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* As spleen diseases are the usual sequelæ of the remittent and intermittent forms of malarious fever, so are hypertrophy of the testes in the male, and of ovaries, and thyroid gland in the female, or œdema of the skin of the legs and feet in both sexes, the common sequelæ of the fortnightly, tidal, or lunar fevers. These safety-valves of malarious poisoning, viz., the spleen, the testes the ovaries, the thyroid gland, the skin of the leg and feet, *&c.*, and rarely of the labiæ majoræ, are never affected all at once, and rarely more than one at a time.

In the interior of the district of Chittagong, the greatest source of unhealthiness is the great number of tanks, which have been, and are still being annually dug, especially by the Hindus, in memory of their departed dear relatives. These tanks, no sooner dug, are neglected and forgotten; they thus become gradually filled up with dead and rotten leaves of the plants, which are planted and are allowed to grow thickly on their four sides or banks, the aquatic-plants growing on the very surface of the water. The tanks, being thus filled up and gradually dried during the dry weather, cause abundant exhalations of deleterious miasma, thereby making the whole district excessively unhealthy. Chittagong at the period of the Mahomedan supremacy, was one of the most thickly peopled districts in Bengal. With an area equal to that of Moorshedabad, and its population was proportionately much higher than that of the latter. But what is it now? The last census report discloses the mournful tale of their being only 451 souls to the square mile, which is worse than even those of the present epidemic-stricken districts of Burdwan and Hooghly, the population of these being 475, and 1045 to the square mile respectively. An experienced Civil Surgeon of Chittagong, in his sanitary report, described the people, as having become from continued unhealthiness of the climate, "*stunted, ill-shaped* and *decrepid-looking,* as the result of malarious poison acting on successive generations." In short, it is no exaggeration to state, that the condition of Chittagong is far more deplorable than that of Burdwan or Hooghly, and had it been in as close proximity to the metropolis as the other two, much more perhaps would have been done for its sanitary improvement.

4. *Fever in Dacca.*

The city of Dacca stands on the Boori-Gunga, a stream twice as broad as the Thames, or as large as the river Hooghly opposite the Hooghly station. Upwards of sixteen years ago it was a current strong and deep, the residents enjoying the average health of a Bengal town. Its closely-packed brick houses

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Elephantiasis of the scrotum, of the legs, of thyroid gland, &c., are generally constitutional or hereditary; but this is invariably owing to residence in malarious countries for some generations. One thing however, is pretty certain, viz., those born with these local vices or weaknesses, suffer from the developement of the diseases only after they have themselves resided under malarious influences.

With regard to direct solar or lunar influence on the human body, it is quite a natural inference that when these immensely large heavenly bodies, the sun and the moon, have influence in the causation of tides of the ocean, there is no reason why they cannot, in the same manner and proportion, ruffle the humours of the body, especially of parts or organs, of which the vital force or power is deficient or low, and which consequently, fall an easy prey to the effects of the physical force. This may partly explain why those organs mostly suffer with fortnightly attacks of fever.

without ventilation, its obstructed sewage and its imperfect drainages, were usual causes of unhealthiness. In those times, small-pox and cholera and low forms of abdominal typhoid fever, were more or less prevalent throughout the year. But the climate became still more deteriorated from malaria, when the river silted up where it passed by the station. The formation of the *char* is still going on in the river, and the station is more unhealthy than before. A fever, like that of Chittagong or Jessore, is also endemic in the station. The proposed water-works promise to supply good drinking water to the residents; but fever will not leave the station until the *char* is removed, and its drainages and sewages are well looked after.

5. *Fever in Jagaer.*

The thickly-peopled village of *Jagaer* stood on the bank of the river *Dhaleshwari*, in sub-division Manikgunge, in the district of Dacca. The residents were mostly wealthy mahájans or traders, and carried on extensive goods traffic by the river. In 1863, it commenced to silt up, opposite this important village. In 1865, the silting up progressed sufficiently to cause an outbreak of a very destructive type of fever. Men, women and children, without distinction of age or condition, fell victims to it. The rest, therefore, deserted it to save their lives. At present it is an insignificant village, hardly containing one sixteenth of its former population.

6. *Fever in Jalla-Bari, Backergunge.*

Jalla-Bari is a village in the district of Backergunge, near Jhallakatti Bazaar, a river port, commanding extensive inland trade. The village is isolated from the rest by *jheels* or swamps, where paddy grows in great abundance. During the rains it looks very much like an island in the sea. The village itself was however so high, and so perfectly drained, that the people never complained of any exceptional sickness, until its philanthropic zemindar, the late Babu Dwarka Nath Biswas, commenced to improve the village. He constructed roads which led to almost all the villages around. This greatly interfered with the drainage of the village, and fever of a very severe type broke out and decimated the villagers. The Babu himself while yet young and robust fell a victim to a complication of diseases. The village did not regain its pristine healthy condition, until the roads being cut across by the monsoon water, the drainage was restored to its original condition.

7. *The Endemic and Epidemic in Jessore.*

Jessore is said to be the sickliest district in Bengal, inasmuch as it resuscitated the epidemic fever in 1836, and gave birth to cholera, the scourge of the human race in 1817, the former at Mahamedpoor, the seat of the notorious Rajah Sittaram Raya, the latter at Naldanga, the seat of a Raja of that name. Considering the changes in the physical condition, which it has undergone for nearly a century since, it is nothing strange that Jessore should be the seat of visitations of strange, exceptional, and mortal diseases.

For the topographical description of Jessore, the Delta of the Ganges may be divided into three portions, viz., the western, the middle, and the eastern: Nuddea in the north, and the 24-Purgunnahs in the south, comprise the first or western division; Jessore in the north, and Soondurbuns in the south, form the middle division; and Furreedpoor in the north, and Backergunge in the south, comprise the eastern division. The river Kabatakya separates Jessore from the 1st division on the west, and the river Madhumati from the 3rd division on the east.

Jessore itself may also be divided into 3 divisions, the northern, the middle and the southern; the northern division is the most fertile and important of the three; the Sudder Station of Jessore, the formerly renowned city of Mahamedpoor, the residence of the Rajas of Naldanga and Chackra are all situated in this division; the middle is the basin-shaped low country covered by numerous marshes, and thinly peopled only along the high banks of the courses of the rivers; the southern portion is the reclaimed part of Sunderbans (*vide* Westland's Jessore).

The northern portion which is directly connected with the present narrative, may be considered a little more in detail:—It slopes from N. W. to S. E., in which direction the principal rivers flow, which are no less than six in number, viz., first the Madhumati, (2) the Kumar (which receives the Kaliganga in the district of Nuddea), (3) the Nabaganga, (4) the Chitra, (5) the Bhairab and (6) the Kabatakya. The banks of these rivers being much higher than the intervening open country, they divide the district into so many longitudinal basins, run over by numerous cross branches joining them together. By these rivers, the country used to become annually inundated, until a change took place in the physical condition of the rivers Nabaganga, Chitra, Bhairab, and Kabatakya. They silted up at the points of their origin, either from the Padma or from its branch, and thus ceased to be running streams for great lengths of their courses, and dried up in places, converting the intervening deeper portions into so many stagnant pools; from the beds of these rivers therefore malaria exhaled in abundance, and poisoned extensive portions of the district. Thus commenced the deterioration of the climate of Jessore, and fever became endemic, assuming the virulence of epidemic visitation at times in the dry season following the rains.

The Sudder Station of Jessore stands upon one of these dried-up rivers the Bhairab, which, during the dry weather, ceases to be a running stream from its source to nearly half its entire length, and all the important villages, situated on this part of the river besides the Sudder station, viz., Chaugacha, Sigiali, Haibatpoor, Naupara, Nilgunge, Moorally, Rajahat, Roopdia, and Dyetalla suffer from fever all round the year, except a few months during the rains, when the country is generally inundated.

Under the circumstances it is plain that the unhealthiness of Jessore is a standing calamity, to remedy which the silt at the source of the river should be removed by dredging, or the Sudder Station be abandoned altogether.

That the silting and drying up of the river are the causes of exceptional diseases in the afore-mentioned places, is evident from the fact, that other populous villages, as *Simhatti* and the sub-divisional station of Khulne situated further down on the same river Bhairab, are quite healthy.

Mahmoodpoor is 30 miles to the north-west of Jessore on the right bank of the river Madhumati, the seat of Raja Sittaram Raya of former days. It was a large quadrangle, three-fourths of a mile in every direction, and was surrounded by an excavated ditch. Its drainages ran into the Keshwar-Bheel, on the west of the city, the river bank on its east being on a much higher level.

In 1834-35, the Government commenced the construction of a road from Furreedpoor to Jessore by convict labour. In 1836, the road progressed as far as Mahmoodpoor, between it and its drainage outfall into the Keshwar Bheel, as far as Harekistopoor, a mile to the south-east of Mahmoodpoor. Fever of a virulent type broke out after the ensuing rains, both in Mahmoodpoor, and among the 700 convicts working on the road; of the latter 200 are said to have died in a short time, on account of which the work was abandoned. Mahmoodpoor was entirely deserted. It is now an insignificant village still containing many remnants of its old magnificent buildings.

On the Nuddea side, the road mentioned before, had progressed as far as the Sudder Station of Jessore on its south, cutting off its drainage outlet into the Harina-Bheel, when fever of a destructive character broke out there. In short, the Road popularly called the *Dacca Road*, brought disease and death along its progress into the villages, the drainages of which it obstructed, a positive fact in support of the obstruction of drainage and out-break of severe fever, following each other as cause and effect.

The above are the few districts I had opportunities of visiting in the course of my previous service.

A passing notice of the fever at Rungpoor, Dinagepoor, and Poornea, would perhaps make the narrative complete.

The Nepaul and Bhootan territories, sloping down from the north, and the Gangetic tract sloping down from the south, give the intervening districts under notice, the character of a basin, whence the water of the rains cannot properly drain out; and therefore settles down into their porous soils, and sub-soils; and consequently malarious exhalation must, in these districts, be abundant throughout the year, and fever therefore must be more or less endemic, according to the particular circumstance of each locality.

The Jumna Irrigation Canal and Embankment in Upper India had also given rise to severe out-breaks of fever in those parts or villages of the province, the drainages of which were interfered with by the said works.

To return now to the recent out-breaks, collectively called the Epidemic Fever of Bengal:

The 24-*Purgannahs and Nuddea*:—In 1861, reports of out-breaks of severe fever in those districts are recorded. It raged with great violence at Barrackpoor, Dum-Dum, Baraset, Belgharia, Halishahar, Kanchrapara, Ghospara, Ichapoor, Chagdah, &c.

The Mathura and Borooty Bheels were the drainage outlets of these villages, but the Eastern Bengal Railway-line running between and cutting up the Bheels on the one side, from the villages on the other, the latter became water-logged after the rains; which gave rise to the unusual sickness referred to before. The Ichamutty and Bager Khals, which finally carried the waters of the *Bheels* into the Hooghly, though on the same side with the villages, were not in a position to drain them direct, for the country being sloped from the river-banks as usual, the monsoon water ran off towards the Railway-line, and collected in enormous volumes along the western side of the said Line; but the water not finding a passage, settled down into the sub-soil, and brought on the calamity in question.

In certain villages other causes were in operation to make the visitation of the fever more serious in its effects. For instance, opposite Chagdah and a few other villages, a branch of the Hooghly, from Jasra to Gujea silted up, and made the fever assume epidemic type in the locality. The Baromoshea Khal silted up in front of Allah and so the Bankipoor Khal dried up and gave rise to out-break of fever in Jirat, and Balaghar in 1867. To the west of Beergram, Gopalpoor, and Santipoor, an embankment extending for some miles along the left bank of the Hooghly by obstructing the drainage of the neghbouring villages, was the cause of severe sickness in those localities. A long *char* silted up at the confluence of the *Jelinghee* and *Bhairab* which gave rise to severe out-break of fever at *Meherpoor*, a place about 20 miles from Krishnagar.

Hooghly :—In this district I visited Gopalnagar, a village, which with many other contiguous villages, is very low. The rain water is carried off by two streams, called the Koonty and the Saraswati, into the river Hooghly, the former near Nasarai, and the latter by two branches at Tribeni and Amtah, respectively. These rivers or water courses silted up in their origin and course, and converted the locality into a swamp from which fever-poison was abundantly exhaled to make it extremely unhealthy.

The dam, placed across the mouth of *Garbarry Khal* at Gopinathpoor, was the cause of obstruction of the drainage of many places, viz., Jehanabad, Moheshpoor, Gopinathpoor &c., &c., where there were fearful out-breaks of the fever.

The Kanoo, Tamlabon, Arakoal, and Satmoshia, the Ryepoor and the Gorgatalah Khals, were all closed at different times, and out-breaks of fever were the natural consequences, on each occasion, in those villages, of which the obstructed Khals were the natural drainage outlets *(vide Hindoo Patriot)*.

The road from Khanakool to Mayapoor, crossed the drainage channel of a large number of villages, and gave rise to out-breaks of fever in all of them. In Pandooah and other places the drainage was completely obstructed by the Railway Line and its numerous feeders, and gave rise to fearful out-breaks of fever in them.

Burdwan :—I shall take the liberty again to revert to the consideration of Burdwan fever, the facts connected with it being still in the memory of living men.

A short topographical description of Burdwan will however not be an unnecessary preleminary to the consideration of the out-break of its epidemic fever.

The district of Burdwan may, for purposes of description, be divided into the western and eastern divisions by the Moorshedabad Road, which runs from north to south, through the town of Burdwan.

The eastern division has the said road on the west, the Bhagirati on the east, Moorshedabad on the north, and the district of Hooghly on the south. The western division, having the aforementioned road on the east, is bounded on the north by the river Adjai, separating it from Beerbhoom ; on the west by Purulia and the Santhal Purgunnahs; on the south, by the rivers Damoodar and Dalkissur; and on the east by the district of Hooghly.

Roads :—From the Sudder Station of Burdwan roads radiate in all directions; the principal ones are, 1st the Moorshedabad road already alluded to going northward; the 2nd road branches out from the 1st or Moorshedabad road at Karjanna, eastward to Katwa; the 3rd runs from Burdwan to Sooree; the 4th is the grand trunk-road running through the middle of the district from east to west; the 5th is the East India Railway Line running the same course; the 6th comes from Bancoora through Khandghose; the 7th is the Midnapoor road; the 8th is the Jehanabad road; the 9th is the newly constructed road from the Panduah Station to Katwa; the 10th is the Kalna road proceeding in a somewhat tortuous course through Satgachea; the 11th from Purhasthely on the Bhagirati runs the serpentine course through Bhatooria and Karmon; the 12th is a road from the Panaghar Station on the Ranigunge Line, which goes through Basdebpoor and through the district of Synbhoom to Berhampoor; the 13th and last is the very long and tortuous road which, branching out from the Moorshedabad road, runs at a short distance along the right bank or Burdwan side of the river Adjai; in its course, it cuts the Sooree road, and further on, the Burdwan road from the Panaghar Station, then passes through Shamshoonderpoor and Oakrah to Raniguuge, meeting the last road a few miles above Raniguuge.

The principal roads detailed above and their numerous feeders had cut the country in every conceivable direction. But a new network of roads, the cause of its present misfortune, has sprung up since the construction of East India Railway Line, converging each, to one or other of the Railway Stations in both the districts of Burdwan and Hooghly; so that there has been a complete stagnation of rain-water in those parts of the district giving rise to dreadful out-breaks of fever for the first few years, the sickness gradually abating with the re-establishment of the water-courses, either naturally by the force of the obstructed water, or by human interference.

Rivers:—the district is watered by no less than four large rivers with their tributaries and branches, viz., the Hooghly or Bhagirati on the east, the Adjai on the north, and the Damoodar and Dalkissar on the south. The country between these, is one extensive tract. From the west or on the side of Ranigunge hills, it slopes down eastward, in which direction the rivers Adjai and Damoodar also take their courses.

In the eastern division of the district, the country from the Bhagirati on the one side and Damoodar on the other, slopes towards the middle which is therefore low-lying, or basin-shaped or rather interspersed by numerous swamps or Bheels as they are commonly called; during the rains, especially when the Damoodar is inundated, these are converted into so many beautiful lakes, from which small streams or khals carry out the water back to the parent stream. The drainage of the country being thus kept up, the villages become dry shortly after the rains are over.

Why the river Damoodar inundates Burdwan, more than any other, can be easily understood when it is known that the Hazaribag and Ramgar hill-tracts pour all their waters during the rains into this solitary and proportionately small stream, which therefore used to inundate and disgorge its superfluous water over its low left bank into the low-lying tracts of the Burdwan district, before the construction of the embankment on the Burdwan side of the Damoodar. Nor was this annual inundation without its beneficial results on the country; for it supplied fresh water to all the tanks of the districts, supplied materials for the silting up of the low Bheels, rendered the rice-fields more fertile than before, and lastly the receding current carried out all the impurities of the land whether animal or vegetable. But as the inundation committed irreparable damage to the works of the E. I. Railway Line, the embankment alluded to before was raised, and this assisted by dams, placed across the mouths of numerous khals, blocked up the rain-water and thereby made almost the whole district water-logged.

In the whole district of Burdwan, the southern or the Damoodar division suffered most (*vide* Official Reports); and this is what might have been expected for reasons stated before.

Of all the places in the district, loss of lives in the Sudder Station was the greatest, next in Khandghose, and lastly at Oochalon.

The extent of mortality in Burdwan may be known from the following Official Returns (units left out).

Male	Adults	in 1859=	15,800	in 1872=	12,300
	Children	„	7,300	„	4,300
Female	Adults	„	17,200	„	12,700
	Children	„	5,700	„	3,200
	Total		46,000	„	32,500

The comparative prevalence of the disease is shown in the following statement of the Civil Dispensaries for May and June 1872.

	May 1872	June 1872
Burdwan	25,744	26,808
Mongalkote	15,706	12,444
Oochalon	20,857	27,373
Raynah	20,661	17,500
Total	112,596,	101,690.

From return (1), it appears that the mortality in 1859 was greater than in 1872, and that in both years, more adult females suffered than adult males. Both these are significant facts, and help indirectly to trace the origin of malaria, and therefore of the fever, to obstructed drainages, causing dampness of dwelling houses. For instance, the great mortality in 1859, and its gradual decrease afterwards, prove that the obstruction to the drainage had gradually yielded to the hydraulic force of the succeeding rains, and decrease of malaria and of fever, were the natural consequences. The comparatively greater mortality amongst adult females, is to be attributed to the custom, prevailing among the natives, of preference being given to males in every respect, who therefore enjoy greater comforts and privileges in a family house than the female members; for instance, as it generally happens among the poorer classes, the males have their *Taktaposhes* or wooden bed-steads to sleep on, while the females sleep on the ground on a bed of straw or bamboo matting overspread with what is called a *Kantha*, which means 4 or 5 layers of old linen, stitched together by thread. Hence it will appear that the males sleeping on raised beds, are less exposed to dampness and enjoy greater exemption from fever, while the females sleeping on the ground are exposed to greater dampness, and accordingly suffer more from the fever.

From 1860 to 1873, I had frequent opportunities of visiting different places in Burdwan striken with epidemic fever, and can vouch for the fact of their greater dampness. It was so well marked that it had not escaped the observation even of the uneducated people of the district. The ground-floors of brick-built houses, which were habitable in 1852 and 1853, were not so from the year of the out-break of the epidemic fever; clothes, beddings, even wooden articles became speedily mouldy, or worm-eaten, and vegetations of damp soil made their appearance. I have myself often experienced a sensation of cold or of chilliness, when first enterring sick chambers of such houses.

Elsewhere I have observed that the difference between the epidemic fever, endemic fever, and common ague, is either of degree or intensity, or of duration. The system is subjected to the action of the poison in many ways.

(1) Excessive exhalation of malaria from whatever source will cause universal and severe out-break of the fever, however healthy the human organism might have been before the attack. This febrile disorder is popularly known as epidemic fever, and has its origin in obstructed drainage from whatever source, causing dampness of villages and human habitations. The plague of Gour, the Mahámárí of Mahmoodpoor, the short-lived epidemic fever of Jessore and the present epidemic of Burdwan, owe their origin to this cause.

(2) When the source of malaria is permanent, its effect on the system is chronic, and the fever thus caused is called endemic. An epidemic out-break may end in endemic prevalence like the present Burdwan fever, or an endemic fever may assume epidemic severity with the sudden increase of malaria after the rains, or in hot weather after heavy showers, or during the full and the new moon in places within the tidal ranges. In Jessore, Chittagong, Dacca, Dinajpoor, Rungpoor, Poornea, &c., fever is of this variety.

While obstructed drainage is the source of malaria in epidemic visitations, natural changes in the physical conditions of khals and rivers, which have gradually silted or dried up, swamps, dried-up tanks or alluval soil, after being submerged with tides, are the sources of endemic prevalence of the disease in certain localities.

(3) The milder visitations of the disease, are the common malarious fever or ague, from which no part of Bengal is free.

If I have been sufficiently explicit, it will appear that marshes or Bheels, and rice-fields, are not the immediate causes of the epidemic under notice. They are, no doubt, sources of malaria, which, however, cannot severely influence the system, if the locality for human habitations be dry. The proposal for draining them would, therefore, be throwing away so much money for nothing. As for draining the rice-fields, the measure would certainly be suicidal; for it would not only be spending money for nothing, as in the preceding measure; but running the risk of bringing on failure of crop, and thus inviting famine, a far greater evil than the epidemic fever itself.

The human organism is susceptible of the influence of the poison of malaria in many ways, and in proportion to the inactivity of the functions at the time of its reception. For instance, the poison enters the system more during the night than during the day; 2ndly, during waking hours, more during rest, than during the activity of the body; 3rdly, more when asleep than when awake; 4thly, when asleep, more when sleeping on the damp ground than on raised Bamboo *máchang* or wooden platform or *Taktaposh*; 5thly, and lastly, more when the poison is exhaled close to human habitations, as in case of obstructed drainage of villages, than when exhaled from a distance, as from distant marshes, dried up beds, or silted up alluvial soils of rivers, &c.

The practical observations, summed up above, require no very detailed explanation. The vital force is stronger during the day than during the night, during activity of the bodily functions than during rest, and during waking hours, than during sleep; then again the quantity of poison absorbed when lying down on the damp ground is far greater than when sleeping on raised floor. Hence when houses become damp from obstructed drainage of villages, the fever must rage with epidemic virulence. When only the atmosphere of rice-fields and swamps is saturated with malaria, the human constitution is not so easily affected by it, inasmuch as the people breathe purer air when taking their rest at home, and are in a position to combat its deleterious effects more successfully; the attacks of fever in such cases are generally of the common remittent or intermittent types, and are amenable to thorough cure. If the source of malaria be permanent, the system becomes chronically affected, and there is no remedy for the evil until the place is changed, or the place itself undergoes a change for the better.

With these different types of malarious fever of different degrees of intensity, a good deal of other fevers are intermixed; for instance, the rheumatic fever of the rains, the catarrhal and congestive fever of the cold season, the bilious or ardent fever of the hot season, and the sewage or fæcal fever of Calcutta, which latter has most of the symptoms of abdominal typhoid fever of Europe, with symptoms of malarious fever superadded to it.

The assertion that "the fever exists endemically in the principal rice-producing districts in Bengal," does not prove that the rice-field is the only cause of the fever. For both Backergunge and Mymensingh, which are the greatest rice-producing districts, have also the reputation of being two of the healthiest places in Bengal.

I have elsewhere stated that the draining of the rice-fields, or otherwise interfering with them, would be a suicidal measure, and would be productive of no ultimate good. Certain species of *áman* rice in Jessore, such as the Ryedah, the Nappa, the Dalkochoo, &c, grow in 16 to 24 feet of water, and in such abundance, that for cheapness they form the staple article of consumption of hundreds of thousands of the poorer classes. Other paddies grow in one or two feet of water. If the water was therefore drained from the fields in which they grow, failure of crop would not only be followed by inevitable famine, but the lands remaining uncultivated would be more fertile sources of malaria than ever. In Arracan, fever decreased with the increase of rice cultivation in the district; would the result be otherwise in Bengal? The Civil Surgeon of Burdwan upholds this view of the question, and contradicts the assertion that "malaria increases with the increase of rice cultivation." I myself do not affirm that malaria is not at all exhaled from rice-fields; but what I contend for is, that the poison of malaria thus produced is either used up in the growth and maturation of the paddy plants, or its effects are otherwise counteracted by them.

Again, the statement that "malarious fever is at its height, when rice continues in the field and decreases from after the reaping of the harvest," is perhaps true, but I do not think, it helps the solution of the difficulty, nor would it be sound logic to connect these two concomitant circumstances, as cause and effect; for *post-hoc* is not always *propter-hoc*. The fact is, as long as rice-fields are watery and soft, the rice plants grow and the paddy matures, and the soil also from its excessive moisture, exhales malaria; but the reaping time comes after the grains are matured, and when the ground has sufficiently dried up also; when therefore malaria must decrease, or disappear altogether.

The medical faculty of the present day is not unanimous in attributing malaria to the *combined action of water* and *dead vegetable matter*. At least some of the greatest medical authorities (Dr. Fergusson and Dr. Aitkens) hold the opinion that the origin of malaria is independent of dead or living vegetable matter. In Bengal, no part of which is exempt from this condition, where admixture of rotten vegetable matter with water is the natural state of things, I should say the theory, unsupported by facts, breaks down entirely. Bengal is one interminable Jungle, intersected here and there by water-courses of various dimensions. The plant-world grows here in all its wild luxuriance, the very habitations of the people are hidden from view by them, rotten vegetable substances color and change the very taste of their drinking water, yet the soil being pretty dry, the places are proprotionately free from malarious fever. On the other hand, in the sandy regions of the Andes, where a vegetable shoot may not be seen for miles around, people are often struck down by the fever. That shady trees rather decrease the exhalation of malaria, I shall show hereafter.

The question, whether bad drinking-water is the direct or exciting cause of the fever-poison, must, therefore, be answered in the negative. Dr. Payne and other eminent physicians, who visited the fever-stricken tracts, are also pretty unanimous in their opinion that bad drinking-water is not the cause of the fever. In the Sudder Station of Chittagong, people generally drink the very pure and wholesome water of its numerous springs, yet they are without exception almost subject to malarious fever and its consequences. The people along both sides of the river Hooghly, especially the Hindoos, without exception, drink the fresh water of the holy river. Nevertheless the Epidemic Fever has not spared them. The truth is, as Dr. Payne has remarked, " an overcrowded and a dirty village here, and foul drinking-water there, may determine the local feature of the fever, but not cause it."

One more point remains to be considered here with regard to the Etiology of the disease: Because a man once contracting the disease (ague) is subject to frequent paroxysms of the same, though removed from the continued influence of the poison, it has been held as very probable that whatever the malaria, or the cause be which gave rise to the ague, it can be conveyed from one place to another by means of the wind even without affecting certain intermediate places, or through the medium of water. I confess I cannot understand the force of this argument. Let us take the case of primary syphilis or small pox; both these diseases can be conveyed by the agency of water or wind to any distance, and also introduced into the system by direct inoculation; however introduced a succession of phenomena or symptoms will be produced like the successive paroxysms of malarious fever, which may extend over many days or months or years. Would it be right or scientific to hold, that the succession of the peculiar symptoms, in these cases, were not the effect of single infection or inoculation, but the result of the same poison being repeatedly introduced through the medium of water or wind? Even admitting that malaria may be conveyed to distant places, by the wind or through the water, it therefore does not follow, or at least it is not supported by facts, that the transferred cause of the fever, undergoes any zymotic change like the poison of small-pox, and gives rise to a fresh out-break of the fever in a healthy locality.

It has been asked that if obstructed drainage be the cause of epidemic fever-poison, (1) why does it rage in a place for some years, and then disappear gradually though the obstruction apparently continues? (2) Why does it visit other places when such obstruction does not appear to exist?

The first I have incidentally explained; the obstruction imperceptibly wears out or gives way to the repeated hydraulic force of the monsoon water, applied against it, and so the epidemic disappears also. Where the epidemic has disappeared after a number of years, it will be found that the obstruction has yielded somewhere:—In the case of a road, it has either been cut up or swept away by the force of the current or its upper part has been so much washed away by the rains, as to allow a clear surface drainage, in the case of a khal, or creek, its dam must have given way, or a new drainage out-let has been formed in some other new and unexpected direction.

With regard to the second point, viz., the epidemic fever visiting a place where no obstruction to drainage apparently exists, it will on minute examination be also found to be otherwise. Then again, when the epidemic fever breaks out in a locality, the neighbouring villages are in great fear of the same calamity overtaking them shortly; thus the autumnal fever, or that which must break out every where in Bengal after the rains are over, is often confounded by them with what is called the epidemic fever. Nay, other fevers, which have no connection whatever with malaria are included in the same category. In such cases obstruction to the drainage to account for them must, as a matter of course, be absent.

Epidemic fever, like cholera, has been described as making its progress in a regular or capricious manner; in the one case affecting all the places in its gradual course; in the other, going backwards and forwards, or leaping over a number of villages to attack a distant one, varying to the right, or to the left, or re-appearing in its original haunt again and again. This being so, how, it has been asked, is it to be accounted for on the drainage theory?

In explanation of this it is to be observed that such an account of the progress of the disease rests on incorrect observations. But irregularity in its progress, may in almost all cases be traced to variations in the height or elevation of the villages above the sea level, or to differences in the degree of their moisture. Hence in the long process of the drying of the soil, under the influence of the solar heat extending over some months, the degree of moisture adequate to generate fever-poison must vary as to time, in different localities or villages, whence it naturally follows, that in different villages, an epoch though different in order of time, must also arise, when the malarious exhalation must be at its maximum, and when fever must also break out with epidemic severity.

The village of Balan in the Bood-Bood circle in Burdwan, and the village of Chandoor in the Jehanabad Sub-division in Hooghly escaped the epidemic fever. From this it is not to be understood that there was no fever at all in those places, but that it had not the epidemic severity. These places enjoyed their exemption on account of their more elevated and dry position. These facts upset the travelling theory of the epidemic fever, and support that of its local origin.

The inhabitants of Balan as well as of Chandoor, although breathing abundance of malaria whenever visiting the places or villages around them, enjoyed the exemption stated before. How is this to be accounted for? As I have explained before, it is at nights, and during the hours of sleep and inactivity, that malaria has the easiest hold of the human organism; whence the people of the villages in question, breathing the dry and pure air of their habitations, escape its severe effects.

Gentlemen, travelling in Dak Palki through the Nepaul Terai, are generally attacked with fever, if they are fasting or sleeping at the time; on the other hand, if they keep themselves awake or have eaten something, or taken a glass of Brandy and water, they escape the attack. The bearers who carry them, also escape, because their bodily functions are in full activity. These facts also explain why malarious exhalations of swamps or low-lying rice-fields, do not generally act detrimentally on the health of those who, though they work in them by day, take their night's rest at safe distances from them.

I believe, I have already explained, how roads and embankments, by obstructing the drainage of villages, give rise to severe out-breaks of fever in them. Dams across the mouth of khals have the same effect, inasmuch as the khals remaining full affect their tributaries, and these in their turn the rice fields or Bheels, until the drainages of villages become finally interfered with; the villages thus become water-logged and so the houses become extremely damp, and unsuited for human habitation. The Mayapoor road, running across the course of no less than ten khals, and affecting the health of no less than one hundred villages of which the khals were the drainage outlets, is an instance in point.

The remark, that Burdwan and Hooghly have been always unhealthy, and that the epidemic fever has its origin in the failing stamina of the population generally, in a degeneration or loss of vital energy, &c., is I am afraid not supported by facts. Burdwan, before 1857, was reputed to have been far healthier than Calcutta, and residents of the latter place often used to take a change to the former for the benefit of their health. So was Hooghly, some years still backward.

"The failing stamina and degeneration" have been attributed "to the increase of population having outstripped the means of production, to an impoverished and under-fed condition of the great mass of the people." In contradiction to the above, Dr. Payne observed, "the people of Burdwan and Hooghly are in better circumstances now than before." Leaving this aside, can it be explained why the strong, the well-fed and the rich people, almost equally suffered with the weak, the poor, and the starved? Then again during the *Orissa famine,* although degeneration or loss of vital energy from starvation was extreme, fever was not one of its usual after results.

That different degrees of fever-poison should affect the system differently, is not to be wondered at. The same difference of effect is also observed when different doses of any other poison is taken, such as Arsenic, Opium, Chloroform, &c.

I believe, it has not yet been definitely ascertained what the relative malaria-producing capacities of the different kinds of soil are. All at present known is that the alluvial soil, a mixture of sand and clay in a moist state, is invariably found to be the most fruitful source of malaria, the next is sandy, then clayey, and least of all the lateritious. But neither the perfectly dry soil, nor masses of water separately, can create malaria; if it be at all pre-existing in either, it is not at least free to exert its noxious influence on the human frame; the combined action of the soil, moisture and a certain degree of heat, appear to be necessary to its formation, evolution, and independent manifestation.

Prevention of the Exciting Causes.

The direct cause of the fever being traced to local defective drainage causing excessive dampness, measures for its prevention would lead to prevention of the disease itself.

(1.) As the odium of having brought the epidemic fever into Burdwan and Hooghly, has been laid at the door of the East India Railway Company, it is but right that they should spare neither trouble nor expense, in examinning their line very carefully and minutely during the rains and after, and restoring every drainage outlet to its original condition. This may be effected in various ways.

(a) A deep ditch, excavated all along the Railway Line, on that side of it where water is seen to collect during the rains, and sloped down into the nearest open water course, or running stream, would effectually remove all obstructions to drainages caused by the Line.

(b) Pucka culverts, or arched drains may be opened across the Line, in as many places as may be necessary, and their sites can be best ascertained during the rains, when places where water stagnates, or moves in sluggish streams, may be marked out for opening the drains after the rains are over.

(c) A sufficient number of sluice-gates should be constructed all along the embankment of the Damoodar, so that while preventing the inundation of the country they may give free outlets to the monsoon or rain-water into the river after the inundation subsides. Or the embankment may be cut across at every place where water stagnates immediately after the rains, and the openings shut up again before the next rains.

(2.) Where dams have been placed across the mouths of Khals, these ought to be cut open.

If these dams be necessary for the growth of paddy in the adjoining paddy-fields, the dams may be allowed to remain for a certain time every year, say, to the end of August, and then cut open to give exit to the water, when no longer required for the mature crop.

(3.) Roads, private or public, should be cut across in every place where water either collects during the rains or moves in sluggish streams. *Pucka* culverts may be constructed at all those spots during the dry season, and the roads restored to their original state.

(4.) When the source of a running stream or river has been cut off, or naturally dried up by silts, the river, as soon as the moonsoon or rain-water has drained off, ceases to be a running stream; it dries up in places, and becomes converted into a number of stagnant pools in other places. From the bed of such rivers malaria is exhaled plentifully throughout the dry season, and fever becomes more or less endemic in all the villages within its influence.

Here no half measure can put things right. If human power and ingenuity are equal to such gigantic works as the conversion of the Isthmus of Suez into a canal navigable by ships of large calibre, there is no excuse why these causes of permanent unhealthiness in localities for human habitations, cannot be removed also. If objections be raised on financial grounds, then such unhealthy places must be forsaken altogether. The Kana Nadi, the Banka Nadi, and many others in Burdwan, Hooghly and other places, may be thus reclaimed. The river Bhairab in Jessore, the Booree Ganga in Dacca, the Karnafoolee in Chittagong, &c. &c., all require to be dealt with in the same way, ere the climates of these places can be expected to improve.

(5.) The alluvial deposit, along one or other bank of a river, is also a source of fever in the adjoining locality. If it is periodically submerged by the spring-tides for 2 or 3 days before and after the full and the new moon, there is generally fortnightly increase of malaria and of severity in the type of the fever. This is what precisely happens at Chittagong where the people religiously observe a fast during the night of the full and the new moon to escape the fever. They act wisely, for they thereby reduce the fluids of the body which, like the water of the ocean, must be subject to the same physical influences.

This evil at Chittagong can only be remedied by strong embankments, having sufficient number of sluice-gates, the former to prevent the spring-water from the river periodically submerging the newly-formed low soil and the latter to keep the drainage from the land open across the work.

(6.) In certain parts of Bengal, (Chittagong, for instance,) all village residences of well-to-do natives are generally surrounded by an excavated ditch, with the exception of a narrow portion, which forms the entrance to the residence. This is a work of extreme domestic utility and of security against burglary; and as the ditch by a process of oozing draws out all the moisture from the enclosed residence, it is not a measure devoid of sanitary advantage when first devised, provided the ditch was made to communicate with some drainage outlet or water course. Where such a communication is wanting, as in the majority of the dwelling-houses at present, the ditches prove sources of great unhealthiness. These, therefore, ought to be either filled up or their outlets re-opened permanently.

(7.) The defective construction of native houses is itself a cause of unhealthiness, for instance, houses with low earthen floors cannot but be damp, and if the ignorant occupants of such houses sleep on beds of bamboo or rush matting or straw matrases on the floor, what else is needed to invite an attack of fever?

Where poverty is in the way of their providing themselves with regular wooden bed-steads, the people can furnish each dwelling-house with common plank or bamboo machang or platform, 4 or 5 feet above the earthen floor which would be as cheap and lasting as the house itself.

(8.) 1st. Old tanks, almost filled up with rotten vegetable substances, which are countless, both in Burdwan and Hooghly, as also in other parts of Bengal, are great sources of unhealthiness in every native village.

2nd. One or more hollows, dug close to every dwelling, 1st, for the purpose of using the earth thus obtained in raising the earthen floors of the houses, and 2ndly for using the water, which must collect in them subsequently for various domestic purposes, are also great sources of unhealthiness in the adjoining residence.

3rd. One of these holes in every dwelling, is used as a cesspool, where the sweepings of the house, the refuse of cooked food, night-soil, cow-dung, &c., &c., are daily thrown in. The unwholesome miasma from them is highly injurious, producing a low form of fever, which is a compound of malarious and enteric fever.

All these sources of unhealthiness should be filled up. Objections may be raised against the filling up of old tanks on religious grounds. In such cases the owners should be required to dig them again, in default of which I do not see why the authorities should not undertake to fill up or drain them at their expense. A well in each house would be a cheaper substitute for a tank.

For the purpose of throwing night-soil, refuse-matters, &c., a long shallow trench may be dug close by, into a part of which the said noxious substances may be buried with a layer, say of 4 inches of earth thrown over it, and repeated daily, until it is filled up to the level of the ground, when a new part of the trench may be similarly used. Thus, when the trench is filled up in the course of a month or so, another may be dug adjoining it, and parallel to it, and so on. This will not only prevent poisonous exhalation close to the domicile, as in the case of open cesspools, but improve the quality of the land thus used.

(9.) Malaria being the combined effect of moist soil and solar heat, a village which is shaded from the sun by large trees with spreading foliage must suffer less from the fever, than another which has no such protection from the solar heat. Hence it is that when under the mistaken idea of living trees and jungles being the cause of malaria, village after village was at one time cleared of them, the edible fruit trees not even being spared, the result was far more deplorable than ever, for the fever raged in them with greater virulence than before.

But dead and decomposed vegetable substances are causes of unhealthiness. For sanitary reasons therefore, especially as one of the preventives of the fever, no living tree or vegetable growth should be cut down, 1st, because there will necessarily be comparative increase of malarious exhalation in such localities, and 2ndly, because dead vegetable substances, unless burnt off, will cause unhealthiness by decomposition.

So much for the prevention of the exciting cause of the disease. I shall now pass on to the next subject.

Prevention of the predisposing causes.

Sanitary measures to prevent or to alter the force or virulence of the fever, or to prevent its complication with other unfavorable conditions, are of great importance in the management of the disease.

(1.) Independent of malarious effluvia, other causes of unhealthiness may exist in the *air* we breathe.

Air, so essential to our very existence, of which a fresh supply is needed in healthy conditions every 3 seconds to keep the machinery of our body in proper working order, *must* be very pure in order that health may be maintained. When, therefore, malaria combines with other causes of impurity, our system must be necessarily victimized to a more complicated type of fever, than when it is the effect of simple malaria. Most of the low forms of fever of Bengal, which greatly resemble the genuine typhoid of temperate climates, and do not yield to quinine or to any medicine readily, are to be ascribed to this cause. The impurities, which generally remain in solution in the atmosphere, are the effluvia of dead animal or vegetable matter. Hence the primary object of all sanitary measures should be the purification of the air of every locality, selected for human habitations.

(2.) *Abundance* of pure air is also essential to sound health. The great mortality in overcrowded Jails and Barracks, is a fact which no one can now deny. Native brick-houses without due provision for thorough ventilation, are therefore very unhealthy; the ground floor apartments of such houses remain entirely damp for the same reason. Houses with walls of bamboo matting are pretty airy and their floors are generally dry, and when the alternative of selection lies between these, the latter should undoubtedly be preferred for habitation on sanitary grounds.

(3.) Water, next to air, is the second most essential thing to life. It must therefore also be very pure. Its deleterious effect on the system when impure is always in proportion to its usefulness in the body. It is the common vehicle of communication of infectious diseases, such as typhoid fever, small pox and cholera. Some people even believe in the solubility of malaria in water, and its conveyance thereby to distant and healthy localities; this may perhaps be true, but it is never known to have thus given rise to out-breaks of the fever in any locality. The poison of fever or malaria has hitherto escaped detection by any of our senses, and by chemical analysis, hence any speculation of its solubility in water, and communication to others thereby, would be useless at present.

Impurities of water, which are themselves not poisonous, often seriously impair the digestive function and give rise to many diseases of the alimentary canal. The system being thus weakened, becomes an easy prey to attacks of malaria. Decomposed vegetable matter in the drinking water, has always been and is still considered by many to be *the source* of malaria. Whether this is true or not, is no part of my task in my present narrative. All I have to allude to now is, that some of the greatest medical authorities of the present day, as I have stated above, are against the theory. It is however still incumbent on all to take the warning and act on the safe side. Microscopic animalcules have been discovered to be causes of many diseases, and in many cases carriers of them from person to person; similar vegetable organisms might be similarly injurious to the constitution and health.

It is therefore always a safe and wise precaution to pass drinking water, 1st, through two filtering earthen pots, filled with charcoal and sand respectively, to boil it next, and lastly to cool it down before taking it internally. This precaution is within the means of every poor man and woman. Poverty can therefore be no excuse for using impure and unwholesome water for drinking purposes.

(4.) Mode of life:—The Burdwan epidemic would not have been half so virulent as it has been had the population been European; the native mode of living is peculiarly adapted to predispose to attacks of the fever. Above all diet, work and rest exert the greatest influence on the health of the masses.

Bengalees generally take two meals per diem, viz., one at 11 or 12 in the morning, and the other at 8 or 9 in the evening. Among the labouring classes or the cultivators, the morning work, which is the hardest, is performed for full 6 *hours* on *empty stomach*. Half an hour before taking the morning meal, they leave the field, take a hasty plunge into the nearest tank, while yet perspiring, changes the wet linen, and sit down to swallow an equally hasty meal of the simplest description, viz., boiled rice, and a curry of dall, which is prepared by boiling a quantity of the unhusked seeds of any of the species of pulse with pepper (or chilly), and salt. Fish when cheap, may be taken in the place of dall, but generally it is an article of luxury, and not within the daily reach of all. There is another class of day-laborers who are poorer than even the cultivators of the soil. They live only on rice and *sag*, which latter is a quantity of edible vegetable leaves, boiled with salt and pepper or chilly, and taken with rice. Shortly after taking the meal, the laborer again runs to his work with a Hookah (smoking apparatus), and some tobacco, which is the only means of refreshing himself now and then, when he is tired with work. He now works for another 4 or 5 hours continuously, and then returns home in the evening. After finishing a few house-hold works if he has time, he takes his second meal, and then goes to take his rest, generally on the damp floor.

From the above summary it is clear, that the laborer violates the laws of health at every step, for instance, (1) he works on empty stomach for 6 hours in malarious tracts or rice-fields, (2) takes a hasty bath, (3) an equally hasty meal, (4) generally defective or insufficient in nutritious elements, (5) returns to his work almost immediately after eating, (6) drinks unwholesome water, (7) abundantly, (8) when over-heated with work, and worst of all (9) lies down on the damp floor, generally on a bed of straw and stitched old linen, to take his night's rest.

Such being their mode of life, it is nothing strange that the people should be prostrated by the epidemic fever, and had not out-door work, and open and free air, counteracted many of the above evil effects, not a single laborer could have escaped the ravages of the disease.

(5.) Peculiarity of the villages. The formation of Native villages in Burdwan and Hooghly, as elsewhere in Bengal, is very defective in sanitary points. I have already alluded to some of these, which I need not detail again. The 1st is one or more hollow grounds or pits attached to every dwelling, the 2nd, the open cesspool, kept for throwing every kind of refuse-matter, the 3rd, the old tanks, filled with rotten vegetable leaves &c., which dry up during every hot weather. 4th, The village roads or foot-paths after centuries of use, both by men and cattle, sink down below the level of the ground on either side, and consequently during the rains, and for weeks after, they become converted into so many narrow pools of stagnant water, through which the people must pass and repass, as often as business or necessity requires. 5th, It is very rare to find the drainage of a village house in proper order. Almost all the above causes have a direct influence on the out-break of the fever after the rains.

(6.) Cleanliness. Natives are not unclean in their own way. Their idea of cleanliness is however vastly different from that of Europeans. Living in warm climate they know the importance of bathing, and washing their bodies as often as they feel the necessity. Natives are not fond of using dirty clothes if they can help it; the habit of anointing their body daily with oil, and going out in dusty air, generally in the state of nudity of the upper half of the body, and wearing a thin linen over the lower part must necessarily make the clothes dirty in a very short time, although they may wash them in water every day. Poverty again, while it restricts them to the use of a few suits of clothes in the year, also prevents their sending them often to the washerman. Again, native females are very fond of rubbing and scrubbing their body, as well as the floors of the houses they live in; some regularly plaster their houses every morning with cow-dung, earth, and water, and sweep their insides 3 or 4 times in the day; such ground floors of houses as are *puckah*, (i. e., prepared by beating down lime and pounded bricks) are washed by the matrons 2 or 3 times daily, or as often as cooked food may be allowed to touch them; the floors therefore remain continually damp and wet with moisture. Here then the native idea of cleanliness is diametrically opposed to the natural laws of sanitation.

From the above summary of the exciting, and a few of the principal predisposing causes of the disease, it is clear that the native idea of sanitation is very imperfect. Hence attributing fever to shut-up drainages, hollow grounds, half-filled-up tanks, cesspools, using unwholesome drink, breathing malaria, sleeping on damp grounds, &c. &c., are mysteries to the mass of the people up to this time, though much may be hoped hereafter with the progress of medical science and education in the land.

REVIEW.

Essays on Medicine: Being an Investigation of Homœopathy and other Medical Systems. By William Sharp, M. D., F.R.S., &c. &c. The Tenth Edition. London. Henry Turner and Co. 1874.

In our review of this work in our last we had arrived at the point where Dr. Sharp was discussing the limits of the principle or the law of homœopathy. This law, both in its limited sense as applied to drugs and diseases, and in its widest sense as applied to agencies other than drugs and disorders other than physical, was not, our readers perhaps are aware, revealed to the world for the first time by Hahnemann. It was so recognized in remote ages as to have passed into proverb, which has been rendered immortal by the bard of Ujjain, the Shakspeare of India. It was recognized by ancient physicians, as is evidenced by the celebrated and perhaps the wisest saying of Hippocrates, that "diseases are sometimes cured by contraries, sometimes by similars, sometimes by remedies which have neither similitude nor antagonism." It is to Hahnemann, however, that we owe the enunciation of the law with a precision which has enabled him and his followers to rescue medicine from the chaos of conflicting theories, and to bring it into the domain of positive science. However apprehended and even recognized before his time, the law was never shown to be systematically applicable in the treatment of disease, and was in fact never worked systematically. Hahnemann developed the law to its fullest extent in its application to drugs and diseases. "Pure experience," says he, "the only, the infallible oracle of medicine, teaches us, that actually that medicine, which, in its action on the healthy human body, has demonstrated its power of producing the greatest number of symptoms similar to those observable in the case of disease under treatment, does also in doses of suitable potency and attenuation, rapidly, radically and permanently remove the collective symptoms of this morbid state, the whole disease present, and change it into health, and that all medicines cure those diseases whose symptoms most nearly resemble their own without exception, and leave none of them uncured." "The fact," he further says, "is established and it matters little respecting the scientific explanation of the *manner in which it takes place;* and I do not attach much importance to the attempts made to explain it."

It will be seen that in the above enunciation of the homœopathic law there is not a shadow of theory or speculation. The law is simply stated as representing the observed relation between the pathogenetic actions of drugs in health and their therapeutic actions in disease. Not only is there no theory in the above sentences, but all attempts at theoretical explanation are discouraged. It would have been well for homœopathy if her founder had followed his own philosophy. Homœopathy would not have been exposed to so much ridicule and opposition if Hahnemann had been satisfied with simply enunciating the law, and not attempted explanation of its *modus operandi.* But unfortunately while he had the true genius of a philosopher able to penetrate the intricacies of nature and disengage her tangled skeins of facts and laws, he also had the impatience of the enthusiast and the visionary which did not permit him to remain satisfied with his own positive discoveries, but tempted him into the treacherous rocks of speculation whereupon he had well-nigh wrecked the vessel of reform so heavily-laden with blessings, had it not been for the practical success of his discoveries.

In Essays vii, viii, and ix Dr. Sharp places before the reader in the clearest light the grand peculiarities which distinguish the New System, viz., the Provings in Health, the Single Medicine, and the Small Dose. Just as the law itself of Homœopathy is not, properly speaking, an original discovery of Hahnemann, so the necessity of proving drugs in health in order to ascertain their curative virtues was recognized before him. But so far as can be ascertained, the recognition of this necessity is not as old as the law itself. Though Hippocrates recognized and put the stamp of his authority upon the law of similars as an effectual mode of treatment, and though he himself appears to have practised it in some cases, he does not say how we are to arrive at the similimum of diseases in drugs, in other words, at those properties of drugs which are similar to the symptoms of diseases. In fact, the discovery of the properties of drugs other than those which are discoverable by the senses, was left entirely to haphazard and chance. Physicians, till the time of Haller, did not feel the necessity of a *method* for this most important object. It was Haller who was the first not only to feel this necessity, but whose genius made the most happy hit upon the *right* method. But it was not given him to work his own method. "He saw," says Dr. Sharp, "but he did not come, nor conquer." Baron Stöerk was perhaps the first to make actual trials with drugs on the healthy human organism. But it was reserved for Hahnemann to make these trials systematically. This has been put very clearly by Dr. Sharp in the following paragraphs :—

> It appears that several physicians have begun this difficult undertaking ; for example, Stöerck, already mentioned, Dieffenbach and Jörg in Germany ; Alexander in Scotland ; Chevallier in France ; and Beraudi and his three friends in Italy. Some of these were before, some after Hahnemann ; none of them homœopathists ; but their efforts terminated with unimportant results.
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> The work was begun and persevered in by Hahnemann, with such an amount of self-denying labour and perseverance as had not been thought of before ; and his results exceed in importance every thing which had been accomplished during all the centuries before him.
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> It is allowed that Hahnemann's provings are not free from errors and defects ; but it is contended and this from personal observation and experience at the bedside of the sick, that, notwithstanding these errors and defects, they are of more practical value in the treatment of disease than anything which had been effected by any former physician.
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> And it is obvious, as it has been remarked already, that the only path now open to professional men in which they can pursue their career with credit, and with any hope of obtaining more power over disease, and consequently of being more useful to their patients, is this method of provings. Is not the old path of experimenting upon the sick shut up,—in the court of reason is it not closed for ever ?

The method of discovering drugs by proving them in health is thus seen to have been arrived at by the highest effort of the human intellect, and is, as a matter of course, of comparatively recent date. But the treatment of disease by drugs may be regarded as old as man himself. What was the mental process by which mankind in the earliest ages came to look upon external agents as drugs or remedial agents in disease, is a problem which deserves investigation. Whatever the process which led to trials of these agents, it would appear to be certain that these trials must have originally been made with single agents or substances. How is it then that such trials with single drugs have not been continued? How is it that combinations of drugs, often of the most fantastic character, have come into vogue? Is it because physicians have become so well acquainted with the properties of the single articles of the Materia Medica that they use combinations with perfect confidence of greater success? The lamentable results of the use of such combinations point to the opposite conclusion, namely, that the necessity of combination arose from the fact of an imperfect acquaintance with the properties of single drugs. This is nothing else than ignorance correcting itself by deeper ignorance. But though the offspring of ignorance, this use of combination of drugs has risen into the dignity of a theory and art, and orthodox physicians now look upon it as "a truth universally admitted that the arm of physic has derived much additional power and increased energy from the resources which are furnished *by the mixture and combination* of medicinal bodies." (Dr. Paris.) Whatever the truth be about the power and energy derived by physic, this is undoubted, and *almost* "universally admitted," that physic venders have derived enormous power and energy to enrich themselves at the sacrifice of other's health and purse, from the invention of the theory and art of the mixture and combination of medicines. It is a noteworthy fact that opposition to Hahnemann originated with the Apothecaries, though it spread with contagious virulence amongst physicians.

The evils of combination are therefore obvious and have been well enumerated by Dr. Sharp, to be—(1) *A bar to progress.* The little knowledge that there was in the mind of the properties of drugs must necessarily become confused, and ignorance perpetuated, under a system that present no opportunities for the separate study of each drug. (2) *A hindrance to the curative action of drugs.* Every cause will produce its own effect, and each drug of a combination will exert its influence in the economy, and what guarantee is there that they will act in harmony for the removal of the disease? On the contrary when they are administered without a thorough knowledge of their individual properties, there is every possibility of their mutually distroying each other's effects. (3) *An injury to the patient,* is most likely to result both from the drugs neutralising each other's effects, and from the combination producing a most deleterious action upon the system already affected by disease.

The advantages derivable from the administration of the single remedy are thus beautifully summarised: (1) *The Simplicity,* in vain desired by Dr. Paris for his method, is thus obtained. (2) *The progress,* in vain awaited for on the old method, is rendered inevitable by the new one. (3) *The Curative effect* of each drug, often in vain expected when other drugs are mingled with it, may be looked for with a greater degree of certainty, when it is given alone in an appropriate dose. (4) *The diminution of the dose,* in vain attempted while several drugs are combined, is accomplished to an extent beyond all anticipation, by giving each drug alone. (5) *The indications of treatment,* in vain sought after on the old method, are not only precise and unmistakable on the new, but, as the medicines, so also the indications are *reduced to one.* (6) *The benefit to the patient,* so often in vain longed for from the complicated prescriptions in common use, may be expected with generally increased confidence from the employment of a single remedy. To illustrate or rather to demonstrate the evils of polypharmacy and the advantages of the administration of a single medicine, Dr. Sharp has cited the treatment of a single disease, laryngismus stridulus. The indications for treatment are copied from Mason Good, and are :—" to produce vomiting by an antimonial emetic; to cause perspiration by a warm bed, diluent drinks, and the same medicine; to excite the bowels by a purgative of calomel; to allay the irritability of the nervous system by giving laudanum in proportion to the age of the patient; and to produce counter-irritation by applying a blister to the throat." Upon this Dr. Sharp remarks as follows :—

> This is a fair specimen of allopathic treatment, let us analyse it for a moment, bearing in mind that the age of the little sufferer is generally *only a few months;* and that the ailment is an affection of the upper part of the windpipe, producing such a contraction of it as threatens suffocation, *all the other parts of the body being healthy.* We cannot but be struck, in the first place, with the terrible severity of the treatment, which alone is sufficient, not only to expose it to just censure but to demand its abandonment; and in the next place, with the fact that all the indications of treatment are direct and violent attacks upon *the healthy parts of the body.* " Produce vomiting by an antimonial emetic," —here is an attack upon the stomach,

but the stomach was previously in health, why produce such a commotion in it, in a baby three or four months old? "Cause perspiration by a warm bed, diluent drinks, and the antimony." Here the skin is assailed, and its natural secretions are to be unhealthily stimulated; the skin was previously in a sound condition, why interfere with and derange that state? "Excite the bowels by a purgative of calomel." The others were but the wings of the invading army,—this is its centre. The poor bowels are always destined to bear the fiercest part of the "energetic" assault. And calomel too—that destructive weapon in the bowels of an infant, and these bowels previously in perfect health. The liver does not escape; mercury, it is well known, acts powerfully on this organ. The calomel given in infancy not unfrequently produces, as its secondary effect, a torpor of the liver, which lasts for years, it sometimes destroys altogether the constitution of the child. "Allay the irritability of the nervous system by giving laudanum in proportion to the age of the patient." The effect of opium is to stupify or deaden the sensibilities of the whole nervous system,—if pushed far enough, to produce coma and apoplexy. In this case it must depress the vital powers at the moment when their vigour is needed to struggle with the difficulty of breathing. And why assault thus the whole nervous system, as yet remaining in health? "Produce counter-irritation by applying a blister to the throat." Alas! poor baby,—the unoffending skin is to be inflamed until it blisters? And this is the concluding blow for the present, of a treatment which is called "judicious" and "active" because it is customary; but will it bear investigation?

Thus every *healthy* part of the body is to be disturbed in its natural action, to be excited, disordered, inflamed, and stupified; all these ailments necessarily more or less overpowering to the vitality of a child, are to be artificially produced, and added to the natural disease with which the infant is already contending.

This Essay of Dr. Sharp on the Single Medicine was written and published in 1854, so that twenty years have elapsed since. Have no changes taken place in the orthodox practice during this long period? "Great changes *have* taken place," says Dr. Sharp, "among the leading members of the profession. Whether these changes are to be attributed to the influence of homœopathy, or to other causes, they are surprisingly in contrast to the older practice—to that which still prevails among a large number." He quotes, as an example of this contrast, Sir Thomas Watson's treatment of this same *laryngismus stridulus,* as given in the last Edition of his work in 1871—"In the paroxysm the *warm* bath might be useful, if it could be got ready in time. The application to the throat of the *hot* sponge is a most accessible, and often a very effectual expedient. Sprinkling the face and chest freely with *cold* water will sometimes unlock the spasm, and set the little sufferer free." "Here," says Dr. Sharp, "we have the use of *water*, warm, hot, or cold; and no medicine at all!"

In treating of the subject of the Small Dose, Dr. Sharp first discusses the limits of our knowledge of nature, and shows how that knowledge "has not only a fixed limit, dependent on the powers of our bodily senses, but that it is also limited by a sliding scale, dependent upon the industry with which we use these powers. This (last) is the boundary which has already so often been extended; these are the barriers which we may still hope to throw down." He then most convincingly points out, that however much our knowledge may extend, it can never reach the *modes of action* of matter or the forces of nature. We may go on disentangling the hidden processes, the succession of events, that intervene between one fact and another related as cause and effect, but *why* or *how* the series are so linked together will always be "above the reach and ken of mortal apprehension." The question of the Small Dose of Homœopathy ought to be considered, therefore, not in the light of *why* or *how* they act, but in the light of *do* they act? All our previous knowledge may not be able to offer any explanation of the fact, may not be able to lend the faintest analogical support to it, nay, may even appear to be directly opposed to it, and yet, when it comes before us supported by evidence which we have no right to impugn, we shall "not be justified in concluding against it by *à priori* reasoning or theoretical considerations." At the very threshold of the inquiry the mind ought to be *in statu quo.* But why should any one be moved to make the inquiry at all? What guarantee is there that there will be no fruitless waste of mental energy after all?

To satisfy the inquirer that the investigation will not be fruitless, Dr. Sharp begins by looking about to see if there are "any facts which render it probable that infinitesimal quantities of ponderable matter *may* act upon the living animal body," in other words, to see if there are *analogous facts* in other departments of nature which may lighten its improbability and consequent incredibility. The facts of light, heat, electricity, and magnetism are cited as facts in point, their manifestations or actions being demonstrable to be due to motions of particles of matter so rare, subtle, and minutely subdivided as to be to us imponderable. "Reasoning, then, from analogy," says Dr. Sharp, "we may conclude it to be *probable* that other forms of matter, even though reduced by the successive triturations, into *similarly small dimensions*, may also act, and act powerfully upon the living body."

Our author then inquires if there are "any facts which show the action of infinitesimal quantities of ponderable matter upon the *healthy* body." But is ponderable matter so divisible? The evidence of mechanics and of chemistry is in favor of indefinite, if not of infinite, divisibility of matter. Dr. Sharp has not cited the evidence of spectrum analysis, but this has carried our ideas of this divisibility to a point inconceivably beyond the limits of either mechanics or chemistry. The structure of organic molecules, as revealed by the microscope, still further widens our knowledge of the subject. But these recondite discoveries apart, we have ample evidence, as Dr. Sharp has well shown, of the indefinite divisibility of matter, and of the action of inconceivably minute particles, in facts which are patent to the commonest understandings. Who has measured or weighed the particles which bodies are continually emitting, and which affect our olfactory nerves and give rise to the sensation of smell? "A grain of musk may be exposed for a long period, and be unceasingly emitting particles, easily appreciated by the sense of smell, yet has it not lost in weight what the most sensitive balance can detect." Again, who has been able to detect, either by mechanical or chemical or any other method within the reach of science, the particles of malaria and of other miasmatic poisons, such as those of scarlet fever, the plague, &c., which produce such violent disturbances in the healthy organism? Again, in the great susceptibility of idiosyncratic individuals to the action of particular substances, have we not convincing proof of the action of minute particles of matter? The more, indeed, we dwell upon this subject, the more we are driven to the conclusion that masses of matter act because the infintesimal particles, of which they are composed, act. The action of the mass is nothing else than the resultant of the actions of its ultimate particles. To maintain that matter can have no action upon the human organism in its attenuated or molecular form, is to assert a proposition which is in opposition to the most positive conclusions of modern science.

Having shown that it is not only probable that infinitesimal quantities of matter *may* act, but that they *do* act upon the *healthy* system, Dr. Sharp next turns to the question,—do they act *remedially in disease*? From the fact of minute quantities acting upon the healthy body, our author concludes that it is in the highest degree probable, if not certain, that similarly minute quantities will act upon the *unhealthy* body; "for," says he, "it may be argued *à fortiori*, if they act upon the body in health, much more will they act when the nervous system is in a state of exalted sensibility, produced by the morbid excitement of disease." This statement involves an assumption which many will be disposed to question, and which will not always be found to be correct. It is not likely that in every case of disease, and in every stage of it, there will be morbid *excitement* and consequent *exalted* sensibility of the nervous system. In many cases, from the very beginning, and in almost all cases at the last stages, there will be the very opposite of excitement and exalted sensibility. Is the reader or the inquirer to conclude from Dr. Sharp's statement that homœopathic medicines do not act in such cases?

It is fortunate that Dr. Sharp is never satisfied with *à priori* reasoning. He always follows it up with positive proof. "The evidence," says he, "which proves the beneficial action of the small dose is the same in kind as that which proves any other natural fact,—it is the evidence of observation and experiment, that which our senses afford us. It is of the same nature as the evidence we have of the relation of cause and effect in any events which happen around us. It does not differ from that which we have of the operation of the *large* doses of medicine." And then gives a number of cases of both acute and chronic disease successfully treated by small doses of medicine. "To conclude," says Dr. Sharp, "one obvious fact cannot be overlooked; all who bear testimony to the efficacy of these doses, have tried them, either upon themselves or upon others; while those, who deny their action, not only have not tested it, but, for the most part, boast that they have not; they reject the proposal to try the remedies with disdain, and continue to stigmatise those who do so as 'knaves or fools,' or 'morally attenuated dwarfs.'—Right reason being our guide, with which of these two parties is truth most likely to be found?" It will not be difficult for our readers to find an answer to the question, thus pertinently put by Dr. Sharp.

In the next Essay (x) the Difficulties of Homœopathy are considered under the two grand heads of temporary and permanent. The former are discussed under the heads of (1) those that arise from the profession, (2) those that arise from Hahnemann, (3) those that arise from the public, and (4) those that arise from the circumstances in which the practitioners of the new method are placed at present. The difficulties due to the medical profession have their origin in the *novelty* of the system which prevents many from making the necessary inquiry; in the *prejudices* of education and already acquired modes of thought, from which the majority find it difficult to emerge, in order to qualify themselves for patient inquiry; in *self-interest*, in *indolence*, and in the *fear of losing respectability*; in the misrepresentation of homœopathy by those who ought to know better and act more fairly; in the general *ignorance* which prevails upon the subject, and which is at the root of almost all the difficulties mentioned before.

The difficulties which have arisen from Hahnemann are *the hypothetical and metaphysical style* in which he has obscured his grand discoveries of the law and of the dose; the *dogmatism* which pervades his writings, in which he went so far as to assert that "he, who does not walk on exactly the same line with me, who diverges, if it be but the breadth of the straw, to the right or to the left, is an apostate and a traitor;" *the want of details* of his original experiments, which has prevented the due appreciation of the true signification of drugs; and the *sectarian spirit* of a portion of the homœopathic body, upon whom the dogmatising mantle of Hahnemann seems to have fallen, which has repelled sober minded men from pursuing the inquiry.

Dr. Sharp enumerates two difficulties as arising from the public, viz., (1) want of confidence in the new system, dependent upon its apparent insufficiency, and (2) the officiousness of friends, which often prevents its fair trial, and is thus "a formidable difficulty, an engine of resistance which has been energetically brought to bear against the progress of homœopathy." Both these difficulties are resolvable into those which arise from the profession, and are referrible to the same cause, ignorance. It is not to be expected that laymen should be able to get over the prejudices of their early education, when professional men with all the advantages of scientific training cannot. Accustomed to measures, which seem to battle heroically with disease, in the fact of their producing violent effects upon the body as a preliminary to removing its disorders, they cannot persuade themselves to believe that medicines which appear to be no better than plain water, which have neither disgusting taste, nor nauseous smell, and which neither purge, nor produce vomiting, nor blister, can be of any use whatever in the treatment of disease, at least, of those diseases which are formidable in their destructive effects, and which, therefore, would seem to require the most active measures for their subdual.

The difficulties that arise from the peculiar position of members of the new school, are indeed due to the spirit of trades-unionism which so thoroughly pervades the orthodox profession. By refusing to meet them in consultation in difficult cases, and even in emergencies, orthodoxy has hitherto very successfully limited the sphere of action of practitioners of the new system; and by shutting the doors of all medical schools against them, depriving them of all share in medical education, it has hitherto very successfully thrown all possible obstacle to the inculcation of the new doctrine.

The *permanent* difficulties "are those which arise from the present condition of humanity, and which belong more or less even to those old sciences whose fundamental principles are best ascertained and explained." Some of those difficulties, as enumerated by Dr. Sharp, are, indeed, inevitable in the present stage of homœopathy, but are not only removable, but will, we believe, be gradually removed with the progress of research, and therefore should not have been characterised as permanent. Already great advance has been made, and if the way pointed out by Hahnemann be followed with all the helps of modern physiology and other collateral sciences, greater and greater advances will still continue to be made. The significance of the old remedies will be more accurately understood, and new remedies will be discovered to meet diseased conditions from which humanity is suffering, but for which no remedy has yet been discovered. The imperfections and shortcomings of the new system, which are inevitable in its infant stage, will disappear when it arrives at maturity, which the progressive character of our race makes us believe that it will. We do not go the length of maintaining that homœopathy, or rather therapeutics, as purged and purified by homœopathy, will ever succeed in abolishing death, but we certainly do look for the future which will only come short of this.

Having thus disposed of the difficulties that stand in the way of the progress of homœopathy, Dr. Sharp sets before the reader in the next Essay (xi), the advantages derivable from it both by the physician and the patient. He denounces with justifiable severity the invective and the abuse which have been heaped upon the practitioners of homœopathy by followers of a system "lamentably characterised by ignorance, uncertainty, and cruelty." "But *truth*," as he justly observes, "takes no cognizance of abusive appellations. They may for a time hide her beauty and cover her with disgrace, but they cannot change her character, nor transform her into falsehood. The consciousness of possessing her gives true courage, and teaches the physician to take his place beside his patient with dignified benevolence and intelligent confidence. An adequate knowledge of the new system will enable him to administer some simple means which, in acute disease, will often give relief in a few moments, and in chronic cases, will also frequently, after reasonable perseverance, restore the long-afflicted patient to health and usefulness." The advantages to the physician are enumerated as (1) the emancipation from doubt and confusion, (2) the provision of a guide, and (3) the simplicity of the means; the advantages to the patient as (1) the banishment of nauseous drugs, and painful and debilitating applications, (2) greatly increased efficacy and success, and (3) deliverance from medicinal diseases, and other destructive consequences of former methods of treatment.

In the following Essay on the Common Sense of Homœopathy Dr. Sharp replies at length to the objection raised against Homœopathy on the ground of the impossibility, and therefore absurdity of the small dose, that is, on the ground of its being "opposed to right reason and common sense." "In this question of impossibility," as our author very clearly puts it, "the principle that a remedy is to be given which, as a poison, produces similar symptoms is not included. It may be thought improbable, but it cannot be set down as absurd. Neither is the small dose, within certain limits, exposed to the same charge. That the tenth, or the hundredth, or even the thousandth part of a grain can act in disease as a sufficient remedy, may, like the principle, be thought improbable, but can hardly be thought absurd or impossible. The doses which follow, or, as they are called, the third, or the sixth dilutions—are separated from these by a gulf, to bridge over which is the real difficulty. * * The objection is founded upon the supposition that the means are inadequate to produce the result. The infinitesimal dose is pronounced to be a non-entity—it cannot remove the disease. Hence homœopathic cures are judged impossible." Dr. Sharp shows in his usual happy way, that the objection, as thus stated, is a mere assertion without any attempt at a shadow of proof; that it is made not only in ignorance, indolence, and folly, but that it is urged in shere enmity. The cures of homœopathy with the infinitesimal doses are indeed what never had occurred before the introduction of the system, and all that can be said is that they do not agree with, or are beyond, all our past experiences. In this sense they may be said to be beyond common sense, but nothing short of actual trial and failure with them can justify us to assert that they are contrary to common sense. Every new discovery or invention must be beyond the range of previous experience or common sense represented by it, otherwise such a discovery or invention cannot be called new. But that is no reason why it should be pronounced or rather denounced as contrary to common sense. "To drag forward common sense in this manner," very rightly observes Dr. Sharp, "as opposed to new experiments and investigations of nature, is greatly to dishonor it. Where there is no experience, what common sense does, in such a case, is to urge inquiry, and to dictate a suspension of judgment until enquiry is completed."

But it is idle to urge *à priori* arguments against what are presented as facts capable of ready verification. To those of our colleagues of the old school, who have not yet determined to shut their minds against all friendly advice, we would earnestly recommend the following remarks and suggestions of Dr. Sharp, as worthy of the most serious consideration.

> The confirmation of the fact we are now considering is open to the observation of any medical practitioner every day, and that without reading books on homœopathy. He knows well that *ipecacuanha* causes sickness; when he is requested to prescribe for a child who is suffering from sickness and vomiting from a disordered stomach, let him give a few small doses of this drug. He will thus at once test both the principle and the dose; and unless there is something more about the case than I have supposed, he will find his patient very quickly cured. He knows that *mercury* acts upon the salivary glands; let him give it in a case of mumps, and he will find his patient recover more rapidly than he has been accustomed to observe. He knows that *corrosive sublimate* produces dysentery; let him give this substance in an ordinary case of dysentery, and the disease will most probably yield more speedily than if he had adopted any other mode of treatment. He knows that *white hellebore* is a most powerful purgative; let him give it in a purging, if chilliness or collapse be an accompanying symptom, and he will perhaps be surprised at the beneficial result. He knows that *arsenic* and *phosphorus* produce inflammation of the stomach and bowels; let him have courage to try either of these poisons, and he will probably see severe sufferings subside under the influence of the small dose. He knows that *cantharides* act upon the bladder, and readily cause strangury; let him give them in a similar case, and his patient will most likely need no other remedy. He knows that *nux vomica* acts very much upon the spinal marrow, and upon the organs dependent upon the spinal nerves, and those of the great sympathetic; let him try it in various affections of these organs, and he will often succeed in curing his patient. He knows that *lead* often causes paralysis of the extremities; let him give it in cases resembling those of poisoning by lead, but which have arisen from some other cause, and he may find a very difficult and troublesome affection considerably relieved.

The following Essay, entitled Review of Hahnemann's System, was the last in the previous Editions of this work. In it the controversial portion proper of the work is concluded. It is in part a recapitulation of the substance of the preceding Essays. The author points out what those things in the system and teaching of Hahnemann are which he rejects as untenable, and what those things are which he accepts as true. He then, in reference to the old system, points out what those parts are, the discontinuance of which are involved in the adoption of the new system, and what those parts are which still remain available and useful, and are therefore retained.

"The things in the system and teaching of Hahnemann," which are rejected, are enumerated under seventeen heads, for the following fifteen out of which he is purely responsible;—(1) his explanation of the principle of homœopathy, (2) his definition or enunciation of it, and (3) his belief in its applicability beyond disease and drugs: (4) his belief in medicinal aggravation as essential to cure, (5) his doctrine of the symptoms constituting the disease, which has led him (6) to dismember symptoms from their chronological development, in order that they might be classified under the arbitrary divisions of the regions of the body; (7) his ideas of the primary and secondary actions of drugs, which he sometimes calls alternating actions; (8) his explanation of the efficacy of the small dose, and (9) his fixing the 30th centesimal dilution as the one dose necessary and sufficient for all chronic and acute diseases; (10) his belief in the efficacy of the olfaction of remedies; (11) his doctrine of the "psoric" or itch origin of most chronic diseases; (12) his belief in astral influences over natural disease, and disease brought about by the action of drugs; (13) his belief in the connection between magnetism and homœopathy; (14) the rancour and animosity which he exhibits towards his professional brethren and the mean and vulgar language he adopts when speaking of them; and (15) the effrontery with which he announces his dogmatic assertions, which are "unerring," "infallible," "invariable," "unquestionable," "incontrovertible," &c. In other words, Dr. Sharp rejects "every feature of Hahnemann's exposition of his system,"—there is not one which can be "admired or adopted in the terms in which they are offered;" and lest he should "be supposed to be a disciple of Hahnemann, and be held responsible for his follies," he disclains "such relationship and responsibility." This is strong language, as coming from a sober and philosophic man like Dr. Sharp, and more particularly as he himself greatly dislikes and protests against the mean and vulgar language Hahnemann used against his adversaries. One, who, in a particular department of science, has to give up all his previous learning, thanks to the new light of another's teaching, and who, after the fullest investigation and the maturest experience, retains the cream of that teaching, though it may not "in the terms in which they are offered," does in reality make himself the disciple of the latter, though he may not openly profess himself to be one, which, we must say, he ought to do in justice and in gratitude. And we do not see any reason why, if he does so, if he does thus nobly acknowledge the relationship and discharge the debt, he ought to be held responsible for the short-comings, far less for the follies, of the master. With all possible respect, therefore, for Dr. Sharp's attainments and manly independence, we do not think it is a right spirit which has dictated his disclaiming discipleship to Hahnemann.

In this sweeping and wholesable condemnation of Hahnemann's teachings, Dr. Sharp seems to have been carried away by his zeal to present homœopathy in an acceptable light to the orthodox practitioner. He does not appear to have sufficiently weighed and considered some of the features in that teaching with his usual patience and philosophic temper. Thus with reference to olfactfon of medicines, he does not hesitate to say, "that I have not tried it, and do not intend to try it, except with such substances as camphor, musk, and ammonia,"—a method of procedure in all inquiry he has himself condemned in no measured language. Again, in reference to the so-called astrological considerations, what *proof* has he advanced against the belief in the influence of the heavenly bodies over diseased conditions however brought about, beyond ridicule and dogmatic assertion? And yet again, in reference to the doctrine of the "psora," it is true that "in the terms in which it is offered," it does not appear to be quite a complete doctrine which can be accepted in all its entirety, but is there nothing underlying the mass of facts which Hahnemann has brought forward in its support, which is well worth a medical man's profound consideration? Lastly, although there is evident confusion in Hahnemann's ideas regarding the primary and secondary, or as he sometimes calls them, alternating actions of drugs, is there nothing in these ideas which deserves to be followed up and re-investigated?

In reference to the old school, Dr. Sharp points out that the adoption of homœopathy enables us to abandon the following procedures, measures, and features which have been the opprobrium of medicine, namely, (1) all modes of abstracting blood, as by the lancet, the leech, and the cupping-glass; (2) all modes of producing inflammation, vesication, suppuration, or mortification of the sound parts, as by the blister, the moxa, the issue, the seton, &c.; (3) all mixing and compounding of drugs; (4) all poisonous doses of drugs; (5) all the multiple preparations of the pharmacopœia the infusions, decoctions, extracts, &c., which all from a Pandora's box, better shut up; and (6) last, not least, the mode of thinking of the practitioner at the bedside, which has hitherto been directed not to the true relationship between disease and drugs, but to the arbitrary indications invented by theorists.

Those parts of the old method which are retained as still available and useful, which in fact, receive due significance from homœopathy, are, as Dr. Sharp correctly points out, (1) the study of anatomy and physiology; (2) morbid anatomy and pathology, which are but anatomy and physiology as modified by disease, natural or artificial, (3) toxicology; (4) the operations of surgery and midwifery, except in so far as they are rendered unnecessary by the success of internal treatment; (5) all the advantages derivable from the collateral sciences; (6) diagnosis; (7) diet, and (8) every thing relating to hygiene and moral treatment. On the subject of diet Dr. Sharp very properly remarks that the nature of the case, not the kind of the medicine to be given, should determine the appropriate supplies of food." But while he is justly severe upon homœopathists for their rigor in the matter of diet, he does not notice the superfluity of diet with which old school practitioners gorge their patients, to their undoubted mischief.

The Essay under notice formed, as we have already said, the concluding essay of former editions of this work, and the essay itself was concluded with the following noble words, which are very much missed in the present edition:

> Why the undertaking of such an investigation should have alienated the affections of some of those I most loved, I am unable to understand, but this I know, that, having had it laid upon my conscience as a duty by my friend Dr. Ramsbotham, I have done it with all sincerity and earnestness, and in this report of my proceedings I have kept nothing. I must therefore remember that God has set the good over against the evil; if on the one hand, I have lost very dear friends, on the other, I have gained much in medical knowledge; if I have fallen low in the estimation of my medical brethren, my patients have greatly benefited; if I have suffered much in personal feelings, I enjoy the consolation of a quiet mind.

The remaining portion, full one half, of the volume before us, contains the author's development of the homœopathic system in its double aspect of the law and the dose. This is the most valuable part of his work, and deserves a more extended notice than we can accord it in the present. We intend to take it up in our next.

CLINICAL RECORD.

A Case of low Remittent Fever with double Pneumonia, Violent Hæmorrhage from the Bowels, and Subsequent Diarrhœa.

UNDER CARE OF AN L. M. S.

Girivala, a girl aged 10, an inhabitant of North Entaly, Zillah 24 Pergunnahs, of irritable temper; fair color and slender constitution, was put under my treatment, on the 13th day of her illness, on the 5th of November 1874. She had been under the treatment of a native Kaviraj of considerable note, and presented the following symptoms when I saw her first. High fever; temp. 105.6, skin dry, harsh, and pungently hot; pulse 120, hard, small and frequent; tongue thickly coated, dry and cracked; thirst inordinate; respiration short and shallow; much headache; eyes slightly congested; short and dry cough; stitching pain in the right side; the fever was said to have no remission at all from the first. The right side was not particularly dull; no auscultatory examination was made. There was looseness of the bowels, there being 3 to 5 loose stools daily. Gave her *Aconite* (Φ) in drop doses.

6th November, 14th day of the disease; 7½ A. M. Only 3 doses of the medicine had been taken; percussion note of both sides of the chest natural; respiratory murmur harsh and dry; pulse and respiration frequent; temp. 103.4; skin dry, parched and hot; otherwise the same as before. *Aconite* continued in drop doses.

4 P. M. The patient passed 5 bloody stools within 2 hours, each stool containing both liquid and coagulated blood and altogether measuring about Oiiss. There was no pain in any part of the abdomen on pressure; very much prostrated; temp. 102.6; pulse 132, decidedly hæmorrhagic; bowels slightly tympanitic. Ordered *Carbo Veg*. 6.

7 P. M. Amendment began after the 1st dose of the medicine, and there were only 3 stools since the administration of the same, the three stools contained only about ℥ii of blood, both liquid and coagulated; temp. 103.2.

7th. 7½ A. M. The patient lies on her back; countenance anxious; pain in the chest not much when quiet in bed; slight dyspnœa; was delirious in the night; tongue dry, coated and cracked; lips dry and cracked; is much prostrated, cannot keep her head on the pillow; thirst much; had no stool after the last report. Temp. 103.8; skin dry, harsh and pungently hot; pulse 136, hard and wiry; cough short and distressing; expectoration rust-colored, thick and so tenacious that it adheres to the bottom of the cup when inverted; urine contains only a slight trace of chlorides; percussion note of the right side of the chest, with the exception of the subclavicular and a portion (about half) of the axillary region, very dull; that of the latter regions being clearer. Bronchophony and bronchial respiration heard in the regions noted dull, no vesicular murmur audible in those regions; but crepitant rhoncus heard in the latter 2 regions. Percussion notes of the subclavicular, the mammary, the axillary, the suprascapular and the scapular regions of the left side, are quite clear, but those of the inframammary, the subaxillary and the infrascapular regions are rather comparatively dull. The respiratory murmur of the 5 former regions are exaggerated or what is called puerile, but those of the latter 3 regions copiously attended with minute crepitation. Dr. Sircar saw the patient to-day and concurred with me in the diagnosis that the case was one of double pneumonia, and ordered *Bryonia* 30, 3 doses. There was no enlargement of the spleen nor of the liver; appetite dull; did not sleep well; diet arrowroot.

The evening temperature was 105.4.

8th. 7½ A. M. Temp 103·8; pulse 144; had 3 loose stools in the night; otherwise the same as yesterday. The same medicine and diet continued.

The evening temp. 105.4; slight pain, on pressure, in the right iliac region.

9th. 7½ A. M. No amelioration of any of the symptoms; pupils dilated; deafness or rather hard hearing in both ears; picking at the nose; temp. 103.8; pulse 144; 5 loose scanty stools; cough and expectoration the same; very delirious in the night; breathing difficult and distressing; percussion and auscultation sounds the same. Ordered *Bryonia* 6 and *Bell.* 6, alternately, 3 doses.

7 P. M. Temp. 104.8; pulse 144; otherwise the same.

10th. 7½ A. M. Pain in the chest less; countenance less anxious; tongue coated, dry and cracked; cough and expectoration the same; the respiratory sounds much the same; was less delirious; says, she feels better. Temp. 102.8; skin less harsh and dry; pulse less hard, less frequent, 132. Ordered *Phos.* 6 and *Bell.* 6, alternately.

The evening temp. 104.1; otherwise the same, medicine continued.

11th. Could lie on her side, with her head on the pillow, seems to be a little easier; tongue clearer at the tip and edges, but dry still; pain in the chest much less; breathing still oppressed; cough troublesome; expectoration less rust-colored, less tenacious and less thick; lips cracked still; thirst the same; restlessness much; was delirious in the night. Percussion notes of the affected regions less dull. The air seems to be re-entering the mammary and the axillary regions. Temp. 102.1; pulse 132; delirium less. There is a slight return of appetite. *Phos.* 6 and *Bell.* 6, continued alternately.

7 P. M. Temp. 103.2; pulse 148; there is a slight perspiration on the forehead only; headache less; had 5 loose yellow fœtid stools containing mucus. Diet, arrowroot. *Phos. ac.* 6.

12*th.* 7½ A. M. Temp. 102.2; 2 stools in the night; otherwise the same. *Phos. ac.* 6, cont.

7 P. M. Temp. 103; no stool; has been perspiring; much prostrated. *Merc. vivus.* 6.

13*th.* 7 A. M. Cold sweats on the forehead; extremities colder than the body; breathing oppressed; rattling in the chest and throat; temp 102.2; skin moister; pulse 148, weaker and more frequent; 4 loose stools; otherwise the same. *Antim. Tart.* 6.

7 P. M. Countenance cheerful; pain less; a slight perspiration during sleep; temp. 103.6; breathing less distressed; delirium less; tongue clearer in the middle, and red at the tip and edges; thirst less; cough troublesome; expectoration profuse, but less rust-colored. There is reapperance of chlorides in the urine; bowels a little tympanitic; pulse 150, feeble; crepitant rhoncus heard in some portions only of the right chest; very much prostrated; unrefreshing sleep with anxious dreams; is intolerant of noise; headache aggravated by motion; ringing in the ear; bitter taste in the mouth; appetite continues dull; 3 stools, loose and yellow. *Chin.* 6.

14*th.* 7½ A. M. Fever the same; temp. 102.1; pulse 120, less feeble; a little better in every respect. *Chin.* 6, continued.

7 P. M. Temp. 103.2; pulse 128; feels better; no stool. *Chin.* 6, cont.

15*th.* The infrascapular, the scapular, the suprascapular, the subaxillary, the mammary and the inframammary regions of the right side resonant on percussion; there is no more dulness in those portions, and minute crepitation mingled with healthy vesicular murmur perceptible in all the aforesaid regions; there is also healthy vesicular murmur in the upper three regions of the same side. The several regions of the other side (the left) give clear sounds on percussion. The respiratory murmur of the upper and middle regions quite natural, those of the lower three regions slightly mixed up with minute crepitation. Breathing natural; no pain; expectoration profuse but not rust-colored, less tenacious and frothy; no delirium in the night; tongue slightly coated in the middle but moist and clean at the tip and edges; no thirst. Had been sitting up on her bed; skin moist; temp. 102.2; pulse 112, fair; 1 stool in the night; slept well in the night; appetite fair; has got a very slight enlargement of the spleen; chlorides in the urine; no headache. Diet sago and broth of *magoor* fish. Ordered only one dose of *China* 6.

7 P. M. Temp. 103; pulse 120; otherwise the same as in the last report; no stool. No medicine.

16*th.* 7 A. M. She was restless during the whole of the night, complaining of burning sensation in the skin, and exposed herself to the air which was unusually damp and cold, owing to a shower of rain on the previous day; and there is a relapse of almost all the symptoms noted before. Temp. 104.8; skin hot and dry; pulse 148, feeble; 4 loose yellow stools fetid from the beginning; tearing pains in the limbs; frightful dreams; the fever is said to have commenced, at 8 P. M. with shivering, after a whole day's exposure; delirium much; shooting headache; eyes congested; pupils continue dilated; dryness of the mouth and throat; the stools were attended with colic; appetite dull; cough profuse; expectoration serous-looking. The whole of the right side of the chest elicits a clear sound on percussion. Respiratory murmur quite natural in the majority of the regions, but mingled here and there with slight fine crepitation in the infrascapular region only. Percussion note of the left side of the chest in the inframammary, the subaxillary, the scapular and the infrascapular regions, dull, and no respiratory murmur can be heard in those portions; but the respiratory murmur in the upper regions quite natural, and percussion note clear in those parts. *Rhus tox.* 6. Diet the same.

The evening temp. 105; pulse 162; otherwise the same.

17*th.* 7½ A. M. Temp. 103; pulse 132; otherwise the same; perspiration at night. *Phos.* 6.

7 P. M. Temp. 103.6; pulse 138; 3 loose stools. *Phos.* 6, continued.

18*th.* 5 loose stools; temp 102.4; pulse 112; no better in other respects. Dr. Sircar saw her again to-day and ordered *Phos. ac.* 6.

7 P. M. Temp. 103.8; pulse 138; 3 loose stools; no better than before; very slight epistaxis now and then.

19*th.* Cough troublesome; expectoration purulent; temp. 102; pulse 108; otherwise the same. *Sulph* 6.

9 P. M. Temp. 103.2; pulse 128, feeble; otherwise the same. *Sulph.* 6, continued.

20th Novem. 28th of disease and 16th of treatment. 7½ A. M. Very much emaciated and extremely prostrated; burning sensation, both internal and external; very restless at night; frightful dreams; temp. 102.2; pulse 112, rapid, small and weak; giddiness in the head; good deal of sneezing; countenance pinched; tongue coated in the middle but red at the edges; appetite dull; thirst much, but drinking little at a time; 4 stools, greenish, loose and slightly tinged with streaks of blood; cough troublesome; expectoration scanty and tenacious; breathing oppressed. *Ars.* 6.

The evening temperature 103.2.

21st. 7½ A. M. General symptoms much improved; no stool; fever less; temp. 101.2; pulse 104; cough less; expectoration better in color and consistence.

7 P. M. Temp. 102.2, much better. *Ars.* 6, continued.

22nd. Far better than before; 1 stool; temp. 100; pulse 104, fair. *Ars.* 6, continued.

7 P. M. Temp. 101.4; pulse 108.

23rd. 7½ A. M. Temp. 98; pulse 96, fair; cough, slight and at long intervals; expectoration scanty and frothy. Both sides of the chest elicit clear sound on percussion. Respiratory murmur heard all over the chest, but mixed with slight minute crepitations here and there. One healthy stool yesterday; slept well; no thirst; tongue clean and moist; appetite good. *Ars* 30, 2 doses.

24th. The friends of the patient told me that she had slight fever in the afternoon; no fever now. Doing well, no medicine. Diet milk and sago.

25th, 26th and *27th.* Slight fever of an intermittent type in the afternoon only, with no other symptoms; cough better; expectoration scanty; appetite better; tongue clean and moist; sleeps well; no medicine.

28th, 29th and *30th.* Quinine was given with no effect; the fever continuing the same.

1st December. Quinine failing, Liq. Eucalypti globuli was given in 15♏ doses, 4 times daily, for 3 days, which completed the recovery on the 4th December, 1874.

The patient was all right in 29 days (including the relapse) from the beginning of Homœopathic treatment. No abnormal sounds (percussion or auscultation) could be detected.

Table showing at a glance the Temperature and Pulse on different days.

Day of disease	Morning		Evening.	
	Temp.	Pulse.	Temp.	Pulse.
13	——	——	105.6	120
14	103.4	——	103.2	132
15	103.8	136	105.4	——
16	103.8	144	105.4	——
17	103.8	144	104.8	144
18	102.8	132	104.1	——
19	102.1	132	103.2	148
20	102.2	——	103.	——
21	102.2	148	103.6	150
22	102.1	120	103.2	128
23	102.2	112	103.	120
24	104.8	148	105.	162
25	103.	132	103.6	138
26	102.4	112	103.8	138
27	102.	108	103.2	128
28	102.2	112	103-2	——
29	101.2	104	102.2	——
30	100.	104	101.4	108
31	98.	96	100.	——
32	98.	——	100.	——

Remarks.

This case is instructive in many respects. It, in the first place, shows how difficult it is to distinguish between Remittent Fever with diarrhœa and true Pythogenic or Typhoid fever. Except that the characteristic lenticular spots were absent, the whole course of the disease bore the closest resemblance to the course of Typhoid Fever. I would refer to the persistant diarrhœa consisting of thin, yellow ochery stools, to the copious hæmorrhage from the bowels on the 14th day, to the pain in the right iliac region which began to be felt from the 16th day, to the impotency of Quinine in checking the fever, to the absence of relapses so common in malarious fevers, and to the daily range of temperature. In India, at least, it is doubtful if we are to look upon the lenticular spots as absolutely characteristic of typhoid fever, as even in Europe and America they are not invariably present in all cases.

The case is instructive in another most important respect. The patient was kept on plain arrowroot for 31 days. I could not order milk on account of the diarrhœa, neither could I order broth, thanks to the prejudice of the patient's father. And yet, notwithstanding this apparent want of nourishment, the patient made a good recovery. This shows that what is ordinarily deemed to be nourishment, is not always so, and there can be no doubt that the abundance of so-called nourishment, in the shape of milk, broth, jellies, eggs, &c., with which patients are stuffed, do in most cases more harm than good.

As respects the action of the medicines used, the case illustrates the efficacy of *Carbo Veg.* in checking the intestinal hæmorrhage, and shows how, notwithstanding that the relapse of the symptoms, on the 24th day, was due to exposure, *Rhus tox.*, *Phosphorus*, &c., failed to do any good, and how *Arsenicum* succeeded in bringing about the final recovery.

A Case of Infantile Convulsions and Diarrhœa (or what is commonly called possession by Devil)

UNDER CARE OF AN L. M. S.

All diseases, specially those of nervous origin, and almost all diseases of infancy, over which the rude allopathy of the Kavirajs or native physicians of this country has no influence, are said to be caused by the superhuman power of the evil spirits or ghosts. The Kavirajs almost always try to evade such cases, and Rojas or enchanters, who profess to possess some power over the spirits, are called in to expel or propitiate them by their *mantras* or incantations.

Among the various causes which give rise to such diseases in infancy, the chief and the first consists in the peculiarly rude and almost barbarous management of labor-cases by the native midwives or *Dhais*, and in the *Antoor-ghur* system of confinement ; the second and the equally mischievous is in the improper nourishment of infants with food which is injurious both in quantity and quality.

In the case about to be related, the sufferings resulted from the 2nd cause. The infant was less than 2 months old, and has been fed with the mother's as well as cow's milk. The mother's milk was scanty in quantity, deteriorated in quality, and puriform in appearance ; and the large quantity of cow's milk, that used to be given was undiluted, which an infant at the breast, can hardly assimilate.

No doubt the mother's milk, as Ramsbotham observes," being the nourishment afforded by nature, is much more congenial to the child's wants than any extraneous food, and is most likely to afford suitable sustenance, and preserve the system in a healthy state"; and the process of suckling conduces both to the mother's and child's happiness, comfort andhealth. This is no doubt Nature's intention, but is carried tothe extreme in this country. It is very common to find women suckling her infant till within 7 or 8 months of her next confinement, much to the destruction of her own health, and injury both to her present and future offspring, even if the milk is very much deteriorated in quality. I have seen many a boy of 12 years, sucking his mother's breast. Prolonged lactation is admitted on all hands to be very injurious to children and is productive of many infantile diseases. The age therefore must be fixed at which the infant should be weaned; and as a general principle, a year, on the average, will be found the most fitting time: "for then it requires other nourishment", and its digestive apparatus is sufficiently powerful to assimilate both farinaceous and some preparations of animal food; but in this the best criterion is the constitution of the infant; weak and ill-conditioned children require to be at the breast for a longer period. "The full development of the incisor teeth is the best, though not an unexceptionable indication for weaning"; "but if the strength of the mother appears unequal to the task", and the milk diminishes in quantity or becomes deteriorated in quality, the child should be weaned gradually but not abruptly. It should also be gradually accustomed to other food and thereby quietly reconciled to the deprivation of the mother's milk. The best time to commence this gradual operation is the appearance of the incisor teeth and finish it (weaning) when they are fully developed. Sudden weaning should never be had recourse to as it is full of evil consequences both to the mother and the infant. When the mother has any constitutional taint or her milk is deficient in quantity and deteriorated in quality, recourse must be had to goat's, ass's and cow's milk; specially the latter, diluted with equal quantity of water and sweetened with a little sugar, to resemble as much as possible the mother's milk; the goat's milk being objectionable from its peculiar odor and the costiveness which it produces; and ass's milk being too expensive to be available to all. The quantity of water, prescribed to be added to the cow's milk to make it light and agree with the infant stomach, may be gradually diminished as the digestive organs grow stronger. These together with arrowroot, barley-water, sago, thin *soojee* or light chicken broth, also form the best supplementary diet during the course of weaning.

Certain rules are necessary to be observed in giving milk as a supplementary diet to an infant and they are as follow.

(1) The feeding bottle, a best imitation of nature, ought to be used in feeding an infant.

(2) The milk should be warmed to make it of the same temperature with the mother's milk, which is about 98° F. before it is given.

(3) It should never be given unmixed with water at first.

(4) As the milk gets sour very soon, no part of it which is given in the morning should be given in the afternoon; none which is given in the afternoon, in the first part of the night; and none of the night should be given in the morning; which are generally the cases in this country.

(5) Nothing should be given when the infant does not seem to desire it, or when it shows dislike for its food; and no force should be used to make it drink, as is generally the custom with mothers and maid-servants by pressing the nostrils and stopping the breath, which is full of the risk of suffocation. It is a practice so general in this country that too much cannot be said against it.

(6) The child ought not to be fed in a supine posture as it causes it to incur the risk of suffocation; it should be fed in a reclining position.

(7) No food of any kind should be given to an infant after midnight till morning.

Among the different forms of diet prescribed to be given in the course of weaning, barley-water, if continued long, causes looseness of the bowels, while animal broth leads to an opposite result.

The case presented the following symptoms at my first visit (20th December, 1874). Frequent stools attended with much griping, the stools were watery and greenish; eyes jaundiced; red pimples on the face and neck; excessive crying; very restless; does not sleep in the night; general convulsions now and then; good deal of sickness, retching and vomiting; emaciately to skeleton and proportionately dry; prostrated; frontal fontanelle much depressed; tongue coated and thirst inordinate; skin warm; could not feel the pulse owing to the restlessness; blue color under the eyes; nose pinched; eyes sunk; lividity of the countenance; urine free. The friends of the patient were expecting its death every moment. They had no mind to place the patient under any systematic treatment, but through the importunities of one of their relatives they agreed to place the infant under my care. On my way back I heard the female members whispering one to another, what will a doctor do in such cases when so many *Rojas* had failed. However, I agreed to treat the case, on condition that my orders would be carried into effect, and prescribed *Cham.* 6, thrice daily. Diet half a powah of milk with twice as much of water and arrowroot.

21st. A little better. *Cham.* 6 continued. Diet also continued.

22nd. Much improved. Medicine and diet continued.

23rd. Far better in every respect. The same medicine and diet.

24th. Doing well; no stool for 8 hours; slept well last night; appearance better; fever much less; no vomiting; is still restless. Medicine and diet the same.

11 P. M. Had no stool for the last 24 hours; no urine for 12 hours; screaming violently, so that nothing could pacify it; (the friends of the patient, finding that it does not cry as long as it has milk in its mouth, were continually pouring milk, as they used to do before they placed the child under my treatment, into its mouth, under the mistaken notion, that it was screaming through hunger;) startings of the limbs with distortion of the muscles of the face; stiffness of the limbs; is very restless and does not sleep; bending of the head backwards; pale, sunken face with distorted features; eyes congested slightly; tongue coated white; nausea and empty retching; abdomen painful on pressure; breathing short and hurried; jaundice very slight; skin moist and perspiring. *Bell.* 6.

25th. Much better in every respect. Had one stool after the first dose of the medicine. Had 2 doses of the medicine in the night; slept a little in the latter part of the night, *Bell.* 6, continued. Diet the same.

26th. Doing well; 3 stools yesterday. The same medicine and diet continued.

27th. Has got hiccup; no stool for 12 hours; urine free; seemed to have a little griping; no convulsion any more; some stiffness of the lower extremities still; eyes slightly jaundiced; is extremely irritable. *Nux Vom.* 6. Diet the same as before.

28th. Doing well; had 2 healthy stools after 2 doses of the medicine. *Nux Vom.* 30, 2 doses.

29th. One hard stool yesterday, otherwise better. *Nux Vom.* 30, 2 doses. Diet—milk, raised to double the quantity, i. e., ℥viii. with as much of water and arrowroot.

31st. Reported well.

A Case of Cholera.

UNDER CARE OF DR. M. L. SIRCAR.

Reported by B. N. Dutt.

Basanta Kumar, aged 15 months (son of Babu Amrita Lal Paul of Shibpore) suffering from a chronic diarrhœa for 3 months, was attacked with cholera on the 3rd Oct. 1874, at about 1 P. M. After about one hour from the breaking out of the disease I was sent for, and I found the child with the following symptoms—pulse quick and feeble; extremities rather cold; eyes sunk; restlessness; thirst and prostration. Before my arrival, had one copious watery stool and vomited once. I gave a dose of *Ars.* 3, which quieted the child, and for the next 6 hours he neither purged nor vomited. At 9 P. M. I again saw the child, when I found the pulse improved, extremities hot, but he was now passing watery stools of a whitish colour, the discharges being preceded by rumbling and slight distension of the abdomen: guided by these symptoms, I prescribed *Acid Phos.* 2 with direction to repeat the medicine after every stool.

1st *Nov.*—Patient seems better; distension of the abdomen less; no rumbling; stools yellowish; passed no urine since the breaking out of the disease. I prescribed *Canth.* 6.

2nd. Passed urine once (when not mentioned). Occasional discharge of loose stools at long intervals. Prescribed *China* 3. At 4 P. M. the father gave me report, that the child was sleepy and did not open his eyes, on examination I found the pupils extremely dilated. Prescribed *Bell.* 12. As night advanced, the child began to grind its teeth constantly.

3rd. 6 A. M. Dr. Sircar was called in and prescribed *Stram.* 30.

At 1 P. M. Pupils dilated as before; constant grinding of the teeth with occasional protrusion of the tongue; constant raising of the left hand; gloomy and drowsy; a semi-transparent glutinous substance floating on the inner canthus of the right eye; had 2 scanty yellowish fœtid stools; made water once, the urine having an orange-coloured sediment at the bottom; abdomen distended. *Stram.* 30.

At 8 P. M. Eyes glistening, and the pupils dilated; spasmodic rigidity and clenching of the fingers; stupor and grinding of the teeth; had 4 scanty brown fœtid stools since 1 P. M. At the suggestion of Dr. Sircar I prescribed *Secale* 30, 3 glob.

4th. 6 A. M. Pulse 106; skin hot; fever has not yet subsided. After the administration of secale the child slept quietly for sometime. No rigidity of the hands at present; had 7 scanty watery fœtid stools during last night; passed urine twice. When the child lies on his back, he feels a slight difficulty on deglutition.

4 P. M. At the suggestion of Dr. Sircar I had given 3 doses of *Chininum Sulph.* 1, during the intermission, but the medicine could not keep off the fever paroxysm which came as usual at 5 P. M. The following report was sent to Dr. Sircar.

5th. Had several fœtid stools at night; abdomen distended; pulse 108 and regular. He sent *Chin.* 30.

Evening—Dilatation of the pupils less; still drowsy; staring more natural; had 2 scanty stools; passed water once at 11 A. M.; pulse 108; skin hot; fever came at 3 P. M. Dr. Sircar sent the following directions. "I should do nothing during the fever, but would resume *china* after its subsidence."

6th. Morning. Difficulty of opening the jaws. Had to give a dose of *Bell.* at 9 P. M. At 2 A. M. the dilatation of the pupils was found much less; spasmodic closing of the jaws; pulse 96; skin slightly hot. At 3 A. M., gave a dose of *Cup. Ac.* 3; had 3 scanty stools of the same colour and consistence as before stated; micturited once; abdomen distended. After the administration of *Cup.* the symptoms suddenly changed for the worse. Dr. Sircar was accordingly sent for, and he found the patient with the following symptoms of threatening collapse. Coldness of the upper and lower extremities; tympanitic distension of the abdomen; pulse feeble; eyes dull and without lustre. He prescribed *Carbo v.* 30, to be continued every 4 hours until the temperature rises. Diet: barley-water.

7th. Trunk rather hot; extremities of a normal temperature; had 2 scanty stools of a thicker consistence; passed urine twice, the last with the stool; no distension of the abdomen; no medicine. Diet: light broth and barley-water.

8th. Same as reported yesterday; only more sleepy; no medicine. Diet: light broth and barley as before.

9th. Pulse 108; skin slightly hot; lower extremities of ordinary temperature; no stool; no distension of the abdomen: eyes glistening; glutinous substance floating here and there over the cornea; very sleepy; no medicine. Diet as before.

10th. Pulse 108; skin slightly hot; the whitish spot over the cornea has disappeared; less sleepy; constant moving of the head; had one almost normal stool; made water twice. No medicine.

11th. Pulse 102; skin very slightly hot; no stool; micturited twice; whitish deposit in the urine; no medicine. Diet: boiled *rice.*

12th. Fever came at 8 P.M. last night; skin still hot; pulse

120; no stool; micturited twice. As directed by Dr. Sircar, I gave *Nux. v.* 6, glob.

13*th.* Pulse 126; skin hot; the temperature of the right leg is higher than that of the left; one yellowish stool at 4 A. M.; tongue red and hot; protrusion of the tongue; twitching of the facial muscles; constant rolling of the eye-balls, attended with movements of the head; pupils slightly dilated; occasional moaning; less desire for food. *Bell.* 30th, which, however, not having done any good, *Hyosc.* was given at the suggestion of Dr. Sircar.

14*th.* Pulse 120; skin slightly hot; no stool; micturited once; tongue red; rolling of the eyes less; movements of the head less; no moaning; taking food with avidity. *Hyosc.*

15*th.* Pulse 128; skin hot; had a scanty yellowish stool, after about 40 hours; severe thirst; tongue red; protrusion of the tongue less frequent; moving the mouth as in chewing; occasional grinding of the teeth; sleep disturbed. *Ars.* 12.

16*th.* Pulse 126; skin hot; occasional staring of the eyes; constant chewing motions of the mouth. *Ars.* 12.

16*th.* 5 P.m. Chewing motion of the mouth less; moving his left hand and leg at intervals.

17*th.* Pulse 126; skin hot; had one yellow-coloured thick stool; micturited twice, the last was passed with the stool; movements of the head, hands and legs less; fever persisting without remission for the last 3 days. As directed by Dr. Sircar, all medicines were stopped.

18*th.* *Morning.* Fever abated at 8 p. m. last night when the pulse was 108. The remission however did not last long, for at 6 A. M. the skin was found hot, and the pulse 114; tongue red at the tip with a brownish coating in the centre; had a very scanty stool; movements of the hands and feet constant again, accompanied at intervals by rigidity of the feet; dislike for both food and drink. No medicine.

19*th.* Pulse 120; skin hot; chewing motions and opening of the mouth constant; constant involuntary motions of both hands attended with rigidity and clenching of the fingers. The child is crying loudly since 5 A. M. From the above report Dr. Sircar prescribed *Cham.* 12 glob., under the supposition, as he wrote, that the child was suffering from colic.

19*th.* 5 P. M, Pulse could not be counted on account of incessant convulsions; spasms of the whole body, especially of the hands and legs, with rigidity of the neck; stiffness of the sterno-mastoid muscles; constant, loud crying; distortions of the facial muscles; coldness of the feet. *Nux v.* 30.

20th. Pulse 114; skin slightly hot; no stool for 2 days; neck rigid, but the sterno-mastoids less so; inability to open the mouth; convulsive movements of the hands less. The loud crying has changed into weeping. *Nox v.* 30.

20th. 3½ P. M. The sternomastoid muscles are soft; the neck bent backward; the spasms have again become very violent. After giving 2 doses of *Nux* 200, I tried *Coloc.* 6, with the same unsuccessful result. Incessant loud crying; eyes upturned with rolling of the eye-balls. Prescribed *Bell.* 12.

21st. After the 2nd dose of *Bell.* the child slept for about an hour, and on waking, a third dose was given, this was succeeded by a quiet sleep for more than two hours; the frequency and the severity of the spasms were also less; had 3 very scanty stools, and passed urine twice; skin hot; pulse 120.

3 P. M. After a temporary lull, the spasms reappeared although in a modified and a shade less severe form; with the spasms the child commenced to cry loudly and shake his hands. From the above report Dr. Sircar prescribed *Cina* 30, (which not being at hand, *Cina* 12 was substituted).

22nd. Skin slightly hot; tongue coated white in the centre and red at the tip and edges; neck still bent backwards, but the rigidity less; the right hand slightly stiff; slept quietly for 3 hours; chewing motion of the mouth now and then.

23rd. After the administration of *Cina*, the child commenced to bore at the nose; the spasms appear somewhat less; weeping continues unmodified. From the above report Dr. Sircar prescribed *Cina* 200.

23rd. The spasms appear less, but the crying continues; swelling of the lower lid of the left eye with lachrymation; the spasms commence at 7 A. M., and go on increasing till 3 P. M. when they decrease again; slight coldness of the extremities; pulse 120. *Caust.* 30.

24th. Swelling of the lids almost gone; other symptoms continue without change. *Hep. S.* 6, and lime-water with milk as diet.

25th. Spasms rather severe again; picking of the nose at intervals; crying. For the above symptoms Dr. Sircar directed to resume *Cina* 200.

26th. Spasms much less; crying less; no more rigidity of the neck and limbs. From this time the child made steady progress towards improvement, and in about a week, all the untoward symptoms entirely disappeared, although they left the child severely prostrated.

Clinical Experiences with Ipecac. and Eucalyptus Globulus.

By an L. M. S.

A spare Hindu girl, aged 5 years, of fair color and nervous temperament, suffering from malarious fever of the remittent type for 21 days, was placed under my treatment on the 22nd Oct. 1874. She was under the treatment of a Native Doctor who had given her ʒi of Quinine in 5 days, and on the morning of the day she was placed under my care, he had given her a dose of 15 grs. of the antiperiodic which reduced the temperature, the force and frequency of the pulse, and caused general perspiration, which effects, the doctor thought to be salutary signs, and thought it the fittest opportunity of pushing the drug, and gave her a dose of 15 grains again. About ½ an hour after the last dose of the medicine, the girl began to vomit, and cold clammy perspiration broke forth on the whole of her body. The father of the patient called me in great haste, and I found the patient in the following state :—Pulse exceedingly feeble, scarcely perceptible at the wrist; general convulsions; the spasms were of a clonic nature; countenance pale and cadaverous; eyes upturned, with almost no sensibility; violent retching; lips and tongue blue; blue circles around the eyes. I gave her Vin. Ipecac. in 2 drop doses every 5 minutes. After 4 doses, the symptoms began to give way, and she was nearly all right after 6 more doses of the same in 1½ hour. I saw her, the next morning, with fever not in the least mitigated by the antiperiodic. The father of the girl objecting to place her under Homœopathic treatment I prescribed Liq. Eucalyptus Globulus in 10 drop doses every 4 hours, and the drug was repeated for 4 days, which cured the patient of fever. She had, from the commencement of the fever, looseness of the bowels which also was checked by the drug, and it confined the bowels so much that she had not a single stool for 11 days, after the administration of the medicine, without any apparent inconvenience; her appetite remaining sharp. M. Gubler and Gimbert are of opinion that the drug produces a sort of fever, analogous to malarious fever, which deserves experiment.

I administered the drug in 10 other cases of malarious fevers, both intermittent and remittent; of these 10 cases, Quinine had been given in 8, but without effect; in 5 cases it completely cured the fever and there was no relapse; in one it had no effect at all, this case was much complicated with ascites and other organic derangements; in the remaining 2 cases, which were also complicated with organic enlargements, it checked the fever for a time, but there was relapse afterwards; the 2 cases, in which Quinine was not given at first, had no benefit from the drug which was repeated for 4 days only; one of these was a simple remittent fever, and the other was complicated with uterine derangements: Quinine succeeded in both. In one of the chronic cases, there was sub-acute bronchitis, which also was cured. It increased the appetite in all and confined their bowels with one exception, in whom it increased the laxity of the bowels already existing. It seems to be eliminated through the lungs and the skin, as was evident from its odour in the breath and perspiration. The average duration during which the medicine was repeated in the 8 chronic cases was 7 days.

A Case of Primary Syphilis.

UNDER AN L. M. S.

A Hindu, aged 22, had primary syphilis of the hard variety, about 26 days ago. He had been all along applying mercury in the shape of *black wash*, without any effect whatever, rather it increased the inflammation and swelling, and produced phymosis. The case presented the following symptoms when I saw him for the first time, (Sept 21st, 1874), chronic gleet; involuntary emission of semen, every night; indurated buboes on both the groins; says, he has 2 deep ulcers on the glans and prepuce; evening fever with good deal of chilliness; bowels costive; taste bitter; appetite good; sleeplessness and restlessness at night. Ordered, *Sulph.* 12.

25th Sept. Inflammation and swelling much less; the phymosis easily reduced; the ulcers are deep and unhealthy in appearance; no nocturnal emission; no fever; bowels regular. *Sulph.* 12 continued.

30th. Itching eruptions all over the body, with violent itching at night; sleeplessness and restlessness at night; getting fever at night with profuse sweats; buboes the same; ulcers the same; discharge from the ulcers very scanty; no inflammation nor phymosis; lascivious dreams with painful erections at night; testicles a little swollen; a slght bleeding from the urethra yesterday. Ordered *Merc. Viv.* 6.

The patient, deriving much benefit from the medicine, continued the same for 26 days and reported himself well on the 3rd Novem. 1874; (the recovery being complete in 36 days from the beginning of Homœopathic treatment).

PATHOGENETIC RECORD.

A Case of Ipecacuanha Poisoning.

Shoshi Bhusan Gupta, æt. 23, a student of the Campbell Medical School. took on the 26th Nov. 1874, at 6¼ P. M., about 35 grs. of Pulv. Ipecac. as an emetic for acidity in the stomach. 6½ P. M. Experienced griping pain in the abdomen with a little vertigo and nausea; went to stool and passed a thin natural motion. Nausea and vertigo increased. He felt hot inside and walked down stairs. Nausea was so great and distressing that he was obliged to titilate his throat, at 7 P. M., with the finger in order to bring about vomiting. Vomiting immediately took place. The vomited matters tasted sour, and consisted of some undigested rice mixed up with a large quantity of mucus. The medicine, that was taken, was not visible in the vomited matter. Vertigo and nausea became relieved, but the griping pain continued and increased.

8 P. M. Passed a large stool of watery character with some fæcal matter, and felt much weak and laid himself down on the bed. The griping pain got a little easier.

8¾ P. M. Another loose stool; felt excessively weak; griping pain again increased; and within 15 minutes passed another copious stool on the floor; this time he was too weak to walk to the closet. The stool was greenish-yellow and scattered over with little bits of thready white mucus. The griping after this became much less but the patient became awfully weak and lay prostrate on the bed.

10 P. M. Experienced cramps in the fingers of both the hands. Slight perspiration all over the body.

Suddenly at 10½ P. M. he screamed out complaining of sudden drawing pain in his right great toe. The toe was seen undergoing violent flexion by severe tonic spasm. Immediately after the great toe of the other side was in the same condition. After a few moments both his feet began to be flexed spasmodically, and the muscles of the calves of both the legs began to draw themselves up towards the points of their origin and they seemed to be very rigid. Now and then there was some stiffness in the neck; especially when the sterno-mastoids were rigid and contracted. After that the spasmodic contractions went on irregularly in both the upper and lower extremities, but more frequently and more severely in the latter, proving a severe torture to the patient.

11½ P. M. Patient was much restless; slight general perspiration; extremities somewhat cold. Pulse soft, weak, and slow. (Ginger frictions and hot bottles were constantly applied to the extremities and a dose of stimulant mixture containing Chloric Ether ♏ x x, Spt. Ammon. Aromatic ♏ xx, and pepper mint water ℥i were given at once).

12 P. M. Pulse slightly better, but no relief to the spasms, griping pain increased and he passed a large watery stool, greenish in color, with white mucus floating over it; within 10 minutes passed another stool of the same character in the bed pan. The spasms became more severe; the voice was depressed. No headache, no vomiting; only slight nausea and occasional retching.

At 1 A. M. Another dose of the stimulant mixture was given; several watery, fœtid stools were being passed unconsciously in the bed clothes; could not perceive whether he passed any water. No sleep. Spasms became very obstinate.

2 A. M. One dose of chlorodyne about 30 ♏ was given. Another loose stool of greenish color and containing mucus, was passed half in the bed pan and half in the bed clothes; no relief of spasms. After an hour another dose of 30 ♏ chlorodyne was given. After this the patient felt much drowsy and the spasms began to come at longer intervals and they were of shorter duration and less severity. Stools were all the times being passed unconsciously in the bed clothes in small quantities. The stools were fœtid.

At 5 A. M. again a severe spasmodic contraction took place in the right foot, and immediately it was followed by a copious watery stool with white mucus floating over it. After that (6 A. M.) bed clothes were changed and there were no more stools; no marked spasms; no vomiting, only a slight nausea almost constant for 2 hours more. At 8 P. M. sago was given with lemon juice; it was retained, and the appetite was pretty sharp at the time. The patient felt excessively weak, complaning of pain in the parts which last night had undergone the spasmodic contractions.

Remarks.

This is a most instructive case of Ipecacuanha poisoning, in which the peculiar pathogenetic powers of the drug were strikingly displayed. It is remarkable that, in the case under notice, Ipecacuanha exerted its morbi-genic action chiefly upon the intestinal tract, including the liver, and very slightly upon the stomach itself. It appears to be a law with all gastro-enteric irritants that, in cases under their influence, when the gastric disturbances are less, the intestinal disturbances are greater, and *vice versâ.* What determines the greater severity of the one set of disturbances in preference to the other, it is as yet premature to venture an opinion upon. Dose and constitutional peculiarity are, no doubt, the chief factors in this determination, the dose varying with the constitutional peculiarity.

Were it not for the color of the stools, which was greenish or greenish yellow, we would say the above case presents a complete picture of cholera at its outset. It is to be noticed that the color became fainter and fainter as the case advanced, and probably if it had not been checked by chlorodyne, the watery stools would have become colorless. Ipecacuannha would therefore form an admirable remedy in the diarrhœaic stage of cholera where there is nausea but no vomiting, where there are severe cramps of the extremities and of the neck, and where the stools are attended and followed by distressing griping and colic. In cases with *painless* stools it is plainly *not* indicated. Nor do we think it to be indicated in cases, as has been recommended by homœopathic writers, where the gastric symptoms predominate. This recommendation we venture to look upon, by the light of the case we have narrated, as having been made rather on conjectural (we do not say theoretical) than on practical grounds.

This case, while it confirms the peculiar stools of Ipecacuanha, as given in the *Materia Medica Pura,* brings to light the power of the drug to produce *involuntary* stools. Further, while we have in the *Materia Medica,* mere vague statements as to opisthotonus and emprosthotonus and spasms generally being among the symptoms of Ipecacuanha, we have in this case clear proof of its power of producing spasms of a definite character in both the upper and lower extremities, which commence at the fingers and toes and extend upwards.

Gleanings from Contemporary Literature.

THERAPEUTICS OF ANGINA PECTORIS.

By Samuel Lilienthal, M. D.

C. Hg., in his analytical therapeutics, gives us the following indications from cases cured of angina pectoris (the remedies in brackets are only named by our revered friend as hints to their applications):

Aconite.—With fear of death, coldness, cold sweat, feeble pulse, intense pain in all directions ; suffocative constriction of chest, so distressing that he sweats from agony ; pain in region of heart going down left arm ; pulse small and feeble ; coldness, cold sweat, general or local numbness and tingling.

Actæa racemosa.—Unconsciousness ; dyspnœa ; pain in the chest sharp, lancinating, extends all over the left chest, down left arm and into the back, with dyspnœa and unconsciousness.

[*Angustura.*—Tightness of the chest and pressure in the left side when walking fast ; great oppression in the chest with violent palpitations of the heart, worse when sitting or stooping, with a painful sensation as if the heart were contracted, in the evening while lying in bed ; decreasing when sitting up: *spasmodic breathing,* and palpitation of the heart with anguish].

[*Agaricus.*—Vertigo as from intoxication, especially in the morning in the open air, and caused by the bright rays of the sun ; long-lasting vertigo with great sensitiveness to cold air ; great debility and languor with despondency ; labored breathing as if the chest were filled with blood ; sensation of constriction of the chest, with drawing pain in the region of the diaphragm ; painful palpitation of the heart when standing ; profuse sweat on the chest at night ; weakness and painful weariness in the arms ; acute pulsative pain in left hypochondrium, it rises as high up as the 3d and 4th rib].

[*Arnica.*—Violent attacks of anguish, vertigo in the forehead when walking or when raising and moving the head ; loss of consciousness ; empty eructations or tasting of rotten eggs ; feeling of repletion in the stomach, accompanied by loathing ; short, panting breath ; oppression of the chest, with anguish ; pains in the abdomen and headache ; stitches in the left breast during a deep inspiration, near the sternum ; *stitches in the heart from the left side to the right, with fainting fits ;* the beating of the heart is more like a quivering ; the motion of the heart is first very rapid, then suddenly slow ; cramps in the fingers of the left hand].

Arsenicum.—Anxiety ; occipital headache ; periodical headache ; great thirst for small quantities of water ; indescribable agonizing pain in the præcordial region extending up to the neck and occiput ; oppression and stitches in the præcordial region ; difficulty of breathing, with oppression of breathing, anxiety, and a fainting sort of weakness ; suffocative constriction of chest, so distressing that he sweats from agony, breath goes out even while the patient is getting out of bed ; it takes him a long time to recover his breath ; can only breathe very gently, with his chest bent forward, least motion causes a complete loss of breath ; pressure on the chest, sudden tightness above heart, with agonizing pain in præcordia ; pain extending up the neck ; fainting sort of weakness ; compelled to sit half-upright all the time ; during the severe pains had to bend forward, head to knees ; no ease except while sitting with his head thrown back ; attacked when walking ; paroxysm excited by a single change of position in bed, causing a complete loss of breath and extreme agony ; sometimes worse at night.

[*Aurum.*—Hypochondriasis ; great nervous weakness, with utter despair; feeling as though the heart ceased beating for awhile, and then at once a hard thump is felt ; palpitation of the heart, with suffocative oppression of the chest ; aggravation while reposing, relieved by moving, walking, and on getting warm ; suffocative fit, with constrictive oppression of the chest ; falling down, without consciousness, and blueness of countenance ; violent congestion of blood to the chest ; cutting pain on the left side near the sternum, more violent during an inspiration ; when walking, the heart seems to shake as if it were loose, sometimes a single very violent beat of the heart ; palpitation of the heart, with anguish and oppression of the chest. *Organic affection of the heart.*]

[*Belladonna.*—Throbbing headache, with violent congestion of blood to the head, and throbbing of the carotid ; worse from motion and touch ; light and noise are intolerable ; vertigo when stooping or rising from a stooping position, with flickering before the eyes and a tendency to fall backwards to the left side ; great dryness of the fauces ; labored, irregular breathing, at times hurried, at times slow ; small, frequent, anxious, short and hurried inspirations, with moaning ; violent oppression across the chest, as if compressed from both sides ; stitches in the sternum when coughing or yawning ; sharp stitches in the left side of the chest extending from the sternum towards the axilla, more violent during motion ; a sort of palpitation of the heart when going up stairs ; a kind of bubbling sensation ; tremor of the heart, with anguish and aching pain.]

Bryonia.—Attacks brought on from mental excitement or fright ; cutting in right chest above sixth rib, inside nipple base, cutting pain extending down left arm ; constant dull pain in the left arm ; cutting, from heart down the arm ; slightest motion brings on attacks.

Cactus.—Nervous excitability ; palpitation of the heart in debilitated persons ; worse when lying on left side, when walking, and at night with great melancholy, feeling as though an iron band was around the heart, preventing its normal motion.]

[*Cinchona.*—Excessive nervous sensibility, with a nervous feeling of general weakness ; heaviness of the head, with loss of sight, fainting, and ringing in the ears ; neuralgia of malarious origin ; tight, oppressed and painful breathing ; violent oppression in the pit of the stomach, particularly at night in the recumbent position.]

[*Crotalus.*—Sudden and great prostration of the vital forces ; frequent fainting spells, with imperceptible pulse and inclination to vomit ; sudden breathing with open mouth and distortion of the eyes outwards.]

Cuprum.—Attacks when excited or when exciting herself ; deathly feeling with pain behind the ensiform cartilage ; cold face, blue lips, coldness all over ; sudden attack of dyspnœa unto suffocation.

Digitalis.—Anguish ; vertigo and fainting ; feeble, irregular pulse ; pain extending to the head ; pains under the sternum and below the ribs, right side ; oppression of the chest ; abnormal action of heart and a sense of oppression with tendency to syncope ; feeble or spasmodic pulse with anguish ; pain extending to the head or left arm ; irregular, intermittent, feeble and slow pulse ; pain below the ribs and to the left arm.

Dioscorea villosa.—Neuralgic pains in stomach ; cannot speak ; laborious breathing ; sudden severe pain in middle of sternum ; action of heart very feeble ; pulseless ; pulse intermitting every eight or ten beats, after the attack, for two weeks ; pains extending from chest to both arms and hands ; unable to move ; cold, clammy sweat all over ; pain in sternum.

Gelseminum.—Nervous excitability ; confusion of the mind ; great depression of spirits accompanied with excessive languor ; dimness of vision ; feeling as though the heart would stop beating in a moment, if she did not walk incessantly, with a feeling of impending death ; *sudden hysterical spasms* (onanism) ; nervous chills in very sensitive subjects, effects of fear and fright.]

Hepar sulph.—Dyspnœa after the attack with small pulse, dry, nervous cough, commencing toward evening and lasting all night, after the attack ; pain in neck after the attack ; faintness and inability to recline after attack.

Hydrocyanic acid.—Sudden outcry ; spasmodic sensations ; long fainting spells ; heart-disease with violent palpitations ; feeling of suffocation with torturing pains in the chest ; irregularity of the motions of the heart ; feeble beating of the heart.

Kali carbonicum.—Stitching pains in the right side, commencing in the back and going through the chest, worse at night, when lying down or rising ; dry hard cough, especially aggravated at 3 A. M. ; a blowing noise and a louder second tick of the pulmonary artery ; shortness of breath early in the morning ; dyspnœa during fast walking ; great pain in the chest, especially when talking ; sharp aching behind the sternum, when breathing ; painful throbbing in the clavicle, shoulders, side of the abdomen, etc. ; frequent intermission of the beats of the heart ; crampy pain in or about the heart, as if it were hanging by bands firmly drawn round ; the pain is most felt when taking a strong inspiration, or when coughing, not during exercise ; burning in the region of the heart ; both arms go to sleep even after violent exercise ; pulsative pain in the upper arm, at intervals ; cold hands.]

Lachesis.—Anxious pain with beating of the heart; inability to speak with choking, constriction or rising in the throat; very distressed after sleeping; fainting tendency of nervous women; frequent attacks of fainting every day, with nausea, difficult breathing, palpitation of the heart and moist skin with cold sweat; sudden attacks of vertigo, preceded by palpitation of the heart, with heat, anguish and shuddering, and trembling of the lower limbs; shortness of breath after every exertion, with great weariness; sudden oppression of the chest, accompanied with cough and a feeling of soreness with violent pains in the back and side; violent palpitations of the heart, inability to walk or talk, with swelling of the feet.

[*Laurocerasus.*—Excessive weakness and prostration; slow, feeble, almost imperceptible breathing; dyspnœa, with pain in the region of the heart and slow inspirations; palpitations of the heart, with soft, slow pulse.]

[*Naja tripudians.*—Inability to speak with choking, constriction or rising in the throat, chronic nervous palpitation; chronic hypertrophy and valvular disease of the heart.]

Oxalic acid.—Violent irritation in the alimentary canal; costiveness; difficulty of breathing; jerking inspiration and sudden and forced expiration as though the patient made a sudden effort to relieve himself of intense pain by expelling the air from the lungs; oppression of the chest, especially towards the right side; sharp, darting or lancinating pains in left lung and heart; back numb and weak, also the limbs; peculiar weakness over the whole body, approaching to palsy; coldness and complete loss of power of motion in the legs; movement excites and aggravates pain; remission for some hours or days; oppression in the right side; jerking pains like short stitches, confined to a small space, lasting but a few seconds; aggravation on expiration.

Phytolacca.—Rheumatic diathesis; lame feeling in the left side of the chest near the cardiac region, with much nervous restlessness, worse on motion and particularly during expiration; pains and suffocating feeling in the throat and lungs; pulse weak and soft; intermittent pulse; weak heart's action, with constipation; occasional shocks of pain in the region of the heart, and as soon as the pain of the heart ceases, a similar pain appears in the right arm; constrictive feeling at præcordium, with pressure on the temples; *fatty degeneration of the heart* (Hayes); feeling of lassitude and indisposition to move; great exhaustion and prostration.

Rhus-tox.—Stitches in heart, with painful lameness and stiffness of the whole body and limbs, and pains extending down the left arm; cramps in the limbs; stiffness of the whole body.

[*Sambucus.*—Profuse, debilitating night-sweats; suffocative paroxysms after midnight on waking from a slumber, with the eyes and mouth half open; wheezing in the chest, bluish bloatedness of the face and hands, heat without thirst, weeping when the attack sets in, and stitches in the left side of the chest below the nipple; oppression and pressure behind the sternum, and pressure in the pit and region of the heart, with nausea and a feeling of debility ; sudden clutching, internally in both sides of the chest, in the region of the fourth rib, aggravation by motion.]

[*Sepia.*—Palpitations of the heart on walking fast ; affections of the heart, with violent, unequal, intermittent, palpitating and tremulous motion of the heart ; violent, rather loud and sometimes intermittent sounds of the heart, with dulness of percussion over a larger surface ; flushes of heat, redness, determination of blood to the head and right temple, with cold hands and feet ; scanty urine, costiveness.]

Spigelia.—Spasmodic pain induces vomiting of contents of stomach and mucus, no bile being vomited ; severe pain in epigastrium ; pain rapidly passing around the body from left to right, inside, to scrobiculum cordis, remaining there twelve hours ; abnormal action of the heart with pain, worse when bending forward, touching stomach, lifting arms, or any other motion ; suddenly seized with severe pain in left side of chest, region of heart ; stabbing stitches in heart at every beat, worse in stooping, leaning forward, better when stretching herself out ; worse when lifting arm or from any motion ; every few weeks an attack ; pains so violent that it "knocks her down ;" rapidly passing pain.

Spongia.—Contracting pain in heart ; suffocating sensation in the night, worse with the head lying low, has to sit up ; inability to lie down at all ; debility after every exertion ; the chest feels especially fatigued, almost unable to speak, with heat in the face and nausea ; sudden weakness after moderate exercise in the fresh air ; fierce stinging in the outer part of the chest and arms for several days.

Stramonium.—Oppression and unusual pains in chest ; interrupted breathing ; spasms of chest, especially in hysteric females ; talking excites pains in chest ; cutting pains in the sternum after lying down, ceases when wind passes off, but returns ; pressure near the heart ; heart's action feeble, not frequent ; after a fright steady beating of the heart, increased from every motion, so that he cannot speak for hours ; murmurs are only heard instead of the regular sounds ; flabby heart ; weakness in walking.

[*Sulphur.*—After having walked twenty steps her chest feels constricted, she would like to remain standing from time to time to recover her breath ; the difficulty of breathing seems to be in the pit of the stomach ; weakness in the chest when talking ; painful sensation as of screwing together in the chest, frequently, during motion ; anxious beating of the heart ; pain in the sternum.

Tabacum.—Sudden præcordial anxiety ; features are drawn ; inability to speak, small pulse, violent constriction in throat ; tightness across upper part of chest ; nocturnal attacks of tightness in chest, with palpitations ; palpitation, with tightness of chest, oppression in paroxysms ; præcordial oppression ; pulsation irregular and small, imperceptible ; neuralgia up into neck ; pain between shoulders ; hands cold ; lividity of integuments.

[*Tarantula.*—Palpitations with sadness, oppression, headache, panting respiration and prostration ; murmurs in the chest and palpitation, with alternate acceleration and suspension of the movements of the heart ;

trembling of the heart as when frightened ; præcordial anxiety ; suffocation, so that the patient thinks he is going to die ; great irregularity of the circulation.]

Veratrum album.—Difficulty of breathing ; suffocative constriction of chest, so distressing that he sweats from agony ; pressure on the chest ; sudden tightness above heart ; cramps in the limbs ; general prostration ; skin suddenly cold and clammy ; cramps ; weak, faint, almost to syncope worse sometimes at night.—*The North American Journal of Homœopathy* August, 1874.

"THE RELATIONS OF THE PROFESSION TOWARDS HOMŒOPATHS."

On the 19th of August last a leading article with the above title appeared in the *Medical Press and Circular.* It ran as follows :

"From a Presidential Address to some Homœopathic Congress, which occupies the leading position in a recent homœopathic periodical, we cull the following statement, which we suppose represents the story upon the faith of which homœopaths maintain their character as martyrs. The lecturer asks :—

"'What does this exclusion and professional excommunication of homœopathists mean ? It means that a majority of the profession allege that some of their colleagues who possess the same qualifications as themselves, who have been educated at the same schools and walked the same hospitals, are unworthy to be regarded as members of an honourable profession—are, in short, immoral individuals, with whom it would be ignominy to associate. And why ? Because this excommunicated minority, taught by careful experiment, are convinced that many diseases are best treated by medicines which direct experiment shows are capable of acting on the same parts as are affected by the disease—a rule of practice which the majority only acknowledge in the case of a few diseases, as they have no experience either for or against the validity of the rule beyond these few diseases. The most exalted virtue could scarcely contend that there was aught of immorality in the belief that a great many—instead of only a few —diseases are best treated by medicines that act similarly to the morbific cause ; and yet it is for so believing that we are treated by our colleagues in a so-called liberal profession as though we were guilty of some unpardonable moral delinquency.'

"We are obliged to characterise this statement as a gross misrepresentation, indefensible in any speaker who was presumed to be acquainted with the utterances of professional journals on the subject. The medical profession does *not* refuse to associate with homœopaths for any such reason, but, on the contrary, regards with the most perfect toleration the theory and practice of *similia similibus.* They regard it as unscientific and illusory, but they do not take upon themselves to say that its practice is the result of anything else than a delusion. But they cannot say as much for the practice of infinitesimalism, which, the occasion obliges us to state plainly, they regard as a false pretence, the employment of which disentitles any person to associate with them.

"Medical men can imagine that homœopaths may honestly believe in the *similia similibus* theory, but they cannot be expected to conceive that the majority of the fraternity honestly believe in billionths, and they are therefore obliged to conclude either that homœopaths treat disease by effectual therapeutics under the pretence of giving infinitesimals, or that they pretend to treat disease by infinitesimals, well knowing that they are not treating it at all. This is the reason for the exclusion of homœopaths by the profession. It is for the public to say whether an injustice is thereby done to them."

Dr. Dudgeon, whose Address before the last British Homœopathic Congress was here attacked, sent the following letter which was published in the *Medical Press and Circular* of September 9th:

"*To the Editor of the 'Medical Press and Circular.'*

"Sir,—Having but lately returned to town, your comments on my address before the British Homœopathic Congress were not seen by me until to-day, and I would ask your kind permission to say a few words in my own defence.

"You characterise as a 'gross misrepresentation' my statement that a majority of the profession treat as 'unworthy to be regarded as members of an honourable profession, as immoral individuals with whom it would be ignominy to associate,' some of their colleagues for acting on their conviction that most diseases are best treated by medicines that act similarly to the morbific cause—in other words, homœopathically. You say: 'The medical profession does *not* refuse to associate with homœopaths for any such reason; but, on the contrary, regards with the most perfect toleration the theory and practice of *similia similibus.*' You further state that it is the infinitesimal dose that is 'the reason for the exclusion of homœopaths by the profession.'

"Now it is a very serious thing to be accused of a 'gross misrepresentation,' and I do not suppose I shall appeal in vain to your sense of justice to allow me to lay before your readers some of the evidence on which I founded the statement you thus characterise. I could I am sure, adduce a large amount of testimony from the medical periodicals in proof of my allegation; but, with all deference to you, I believe the resolutions of public bodies like colleges and societies express the sentiments of the medical profession better than 'utterances of professional journals,' for I have not been editor of a professional journal for thirty years without knowing that the editorial plural 'we' often masks the singular 'I.'

"On the 9th of May, 1851, the Royal College of Physicians of Edinburgh passed resolutions against homœopathy in which, after referring approvingly to its having, in 1842, 'peremptorily declined to admit into its body a candidate for its Fellowship because he practised homœopathically,' it goes on to say that 'those of its Fellows who have become homœopathists, or any other medical practitioners who follow homœopathy, must necessarily be alien to the other Fellows and to the profession at large, inasmuch as no Fellow of the College, nor any other physician can, by any possibility, without derogating from his own honour and from the honour of the profession, meet practitioners of homœopathy in consultation, or co-operate with them in the other common duties of professional life.'

"On the 14th of August, 1851, the Provincial Medical and Surgical Association (now the British Medical Association) passed resolutions against homœopathy in which we find the following phrases: 'That it is derogatory to the honour of members of this Association to hold any kind of intercourse with homœopathic practitioners.' 'That there are three classes of practitioners who ought not to be members of this Association, namely: 1st. Real homœopathic practitioners; 2nd. Those who practise homœopathy in combination with other systems of treatment.; 3rd. Those who, under various pretences, meet in consultation or hold professional intercourse with those who practise homœopathy.' 'That the thanks of the Association are eminently due, and are hereby given, to the Presidents and Fellows of the Royal Colleges of Physicians and Surgeons of Edinburgh for their determined stand against homœopathic delusions and impostures.' 'That the thanks of the Association are also due, and are hereby given, to the Universities of Edinburgh and St. Andrew's for their resolution to refuse diplomas to practitioners of homœopathy.'

"In 1851, Dr. R.D. Hale passed his examination, and obtained his degree at St. Andrew's. The Faculty of that University, learning that Dr. Hale was a homœopathic practitioner, demanded back his diploma.

"In 1851, Dr. J. S. Clarke took his degree at King's College, Aberdeen. Soon afterwards some one wrote to the *Lancet* that Dr. Clarke was a homœopathic practitioner. Dr. Fyfe, the Professor of Medicine of the College, wrote to the *Lancet*:

"'I beg to inform you that, at the time of his examination, not the slightest suspicion was entertained of his being a homœopathic practitioner, otherwise the degree would not have been conferred on him.'

"In 1858, Mr. Harvey desired to obtain the degree of M.D. at Marischal College, Aberdeen. He passed the two first examinations satisfactorily; but a report of his homœopathic proclivities having reached the examiners, Dr. Macrobin, in the name of the Faculty, questioned him as to his having practised homœopathically. Mr. Harvey objected to reply to such an inquisitorial question, and Dr. Macrobin refused to admit him to the final trial until he should be satisfied that the candidate had never practised homœopathically. In a correspondence that ensued Dr. Macrobin required from Mr. Harvey 'a distinct declaration that, as a man of honour, you have not practised and do not entertain any intention of practising the profession on other principles than those taught and sanctioned in this and other legally recognised schools of medicine; that homœopathy or any other species of irregular unauthorised practice is what you entirely repudiate.'"

"On the 28th of January, 1859, the Liverpool Medical Institution, by a large majority, altered one of their rules to this effect: 'But no one practising homœopathy shall be eligible as a member of the Institution or as a subscriber to the library, and any member or subscriber who may become a practitioner of homœopathy shall cease to belong to this Institution.'

"On the 10th of August, 1861, the Royal College of Surgeons of Ireland adopted the following ordinance: 'No Fellow or Licentiate of this College shall profess or pretend to cure diseases by the deception called homœopathy.' It is also hereby ordained that no Fellow or Licentiate of this College shall consult with, meet, advise, direct, or assist any person engaged in such deception or practices, or in any system of practice considered derogatory by the physicians or surgeons.'

"I need scarcely say that all these resolutions, as they appeared in turn, were vehemently applauded by every organ of orthodox medical opinion, and that not one feeble protest appeared in the professional journals against even the most extravagant of them.

"I might give a long list of societies, medical, medico-ethical, and registration which have passed laws excluding homœopathists from membership, and even imposing the penalty of expulsion on those of their own members who should meet homœopathic practitioners professionally; but the above will suffice.

"The same system has been carried on by the orthodox majority of the profession on the Continent and in America. So late as 1871 the Massachusetts Medical Society attempted to expel its homœopathic members by resolving that any one who 'adopts as his principle in the treatment of disease any exclusive theory or dogma shall be deemed to have violated the by-laws of the Society by conduct unbecoming and unworthy of an honourable physician and member of this society.'*

"I may conclude this list of my proofs with one from the other side of the Channel. On the 4th of January, 1856, under the presidency of Professor Cruveilhier, the Anatomical Society of Paris expelled by an unanimous vote 'Drs. J. P. Tessier, Gabalda, Fredault, and Jousset, as authors of homœopathic publications, and M. W——, on account of an infamous and felonious act already punished by the law.'

"If, sir, I have been guilty of 'gross misrepresentation' in alleging that the majority of the profession have treated us as unworthy to be regarded as members of an honourable profession, as immoral individuals with whom it would be ignominy to associate, on account of our endeavour to act up to our conviction that diseases are best treated homœopathically, you will surely allow that I had some grounds for the statement; and if it be the case, as you assert, that 'the medical profession regards with the most perfect toleration the theory and practice of *similia similibus*,' then you will admit that the language of the resolutions, &c., I have quoted above must have been used *à la Talleyrand*, to conceal thought, for to an ordinary understanding, and in its literal sense, it seems to have quite an opposite meaning. However, we are glad to have your high authority that the medical profession regards the theory and practice of homœopathy with the most perfect toleration, only we cannot help feeling as puzzled by those demonstrations of toleration as was the poor fellow in the poem who exclaimed—

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* On the strength of this by-law eight members of the Massachusetts Medical Society, whose connection with the Society dated from forty-eight to sixteen years, and who had been openly practising homœopathy, some of them for periods of thirty years and upwards, were brought to trial before a committee of the Society, and after various adjournments were finally, on the 19th of May, 1873, found guilty of "conduct unbecoming and unworthy of an honourable physician and member of this Society" for practising homœopathy. We need hardly add that not the slightest shade of an imputation was brought against what is commonly understood as the moral character of these eight gentlemen, who were thus cast out of the Society they had so long been members of and branded as infamous and dishonourable for having had the audacity to inquire into, and on conviction of its excellence to adopt, a system of medical practice that their judges had not inquired into nor adopted. It should be noted, too, by the Editor of the *Medical Press*, that they are expelled for practising according to the homœopathic theory, and not for using infinitesimal doses. The natural consequences of such an odious and impotent persecution showed themselves even while the persecution was going on. A bazaar for a homœopathic hospital in Boston realised the enormous sum of £20,000, and the newly founded Boston University selected for the professors of its medical school only physicians who were conversant with the homœopathic method, among whom were two of these very men whom the Massachusetts Medical Society have just expelled and sought to cover with infamy and disgrace.

"'Perhaps you were right to dissemble your love;
But why did you kick me down stairs?'

"Your obedient servant,
"R. E. Dudgeon, M. D.
"President of the British Homœopathic Congress of 1874.
"53, Montagu Square, London,
"29th August, 1874."

To this following editorial remarks were appended:

"[Our correspondent very conclusively proves that which required no proof, *i. e.* that the medical profession adopts a relation towards homœopaths which implies that they are unworthy to be regarded as members of an honourable profession. We have been perfectly well aware of the existence of the *pronunciamentos* which he quotes, and yet we reiterate our statement that 'the medical profession regards with the most perfect toleration the theory and practice of *similia similibus*,' but that it is nevertheless a gross misrepresentation to state that homœopathists are ostracised for holding this dogma or practising upon its principle. The medical profession recognises the perfect right of any practitioner to hold any view, however ridiculous and unscientific, and to apply such theory in his practice so long as he does so with honest confidence in its efficiency. The medical profession, therefore, does not put hydropaths in the same category as homœopaths, although the great majority of its members believe the universal practice of water-doctoring to be a delusion and a snare. Homœopaths are not admitted to association with the profession, and have been made the subject of the denunciatory resolutions quoted by our correspondent because it is impossible for intelligent minds to place any charitable construction upon the practice of infinitesimalism, or, in fact, to believe that it is anything but a fraud. Homœopaths may, if they like, be visionaries; but they must establish their claim to be considered to act with honest intention before they can be met as fellows by scientific medical men. It is a matter of some importance to the profession that its members should not, without contradiction, be accused of persecuting any person because he does not agree with them in their own views; and it is necessary, in justice to medical men, to assure the public that homœopaths are not entitled to any sympathy as martyrs at the shrine of science, but are excluded from the pale of the profession because they are guilty of what medical men consider to be a public fraud.—Ed. M. P. & C.]"

Dr. Dudgeon replied to these editorial remarks in the following letter.

To the Editor of the 'Medical Press and Circular.'

"Sir,—As you have had the courtesy to insert my letter with my proofs, I am content to let your readers judge between you and me whether I have been guilty of 'gross misrepresentation' in saying that the majority of the profession treat us as dishonest and immoral, because we prescribe medicines on the homœopathic therapeutic principle, and whether you are justified in asserting that 'the medical profession regard with the most perfect toleration the theory and practice of *similia similibus*.'

"But if you will kindly continue your courtesy—or perhaps I should say your toleration—I would like to make a few remarks on a passage in your comments on my letter. You say, 'Homœopaths are not admitted to association with the profession, &c., because it is impossible for intelligent minds to place any charitable construction on the practice of infinitesimalism, or, in fact, to believe that it is anything but a fraud. Homœopaths may, if they like, be visionaries, but they must establish their claim to be considered to act with honest intention before they can be met as fellows by scientific medical men.'

"I have no desire to dispute your claim to a monopoly by your side of 'intelligent minds,' but I would submit that whether so-called infinitesimal doses of medicine act or do not act, under certain circumstances, is a matter to be determined by experiment and not by 'charitable construction.' Scientific belief is conviction obtained by evidence, and a belief based on any other foundation may be held tenaciously enough, but has no claim to be considered scientific ; so if your side assert that they believe infinitesimalism to be a fraud, we ask, Where is your evidence to constitute your belief scientific ? What if it should turn out that you know no evidence one way or another in connection with infinitesimal doses of medicine ? What in that case is the value of your belief ? Belief without evidence is merely prejudice. Your side object, perhaps, that you have had immense experience of the action of medicines. Granted ; but not of infinitesimal doses. Your two hundred years' experience of the emetic effect of a scruple of *Ipecacuanha* will not enable you to tell how an infinitesimal dose of that drug will act in a case of vomiting.

"Again, why are we to 'establish our claim to be considered to act with honest intention ?' In other departments of science is it considered necessary that their cultivators should give proofs of honest intention ? and if not, why in therapeutics ? Can an alleged fact in therapeutics not be considered on its own merits without proof of honest intention on the part of its propounder ? Some time ago you did me the honour to notice favourably a pamphlet I published on the mechanism of visual accommodation. You considered my statements and experiments on their merits, and did not ask me for proof of 'honest intention.' Why, then, should I be asked for such proof in reference to the action of infinitesimals in disease ? Do therapeutic facts belong to the domain of morals that they cannot be accepted nor even inquired into without an assurance of 'honest intention' on the part of those who put them forward ? and will a therapeutic fact be accepted as true if the 'honest intention' of its progagator is proved ? If so, by all means let us furnish proof of the honesty of our intentions. But how is that to be done ? Must we get a certificate signed by the clergyman of our parish, or a magistrate of our borough, to the effect that we are honestly intentioned people, or will a testimonial of two reputable householders do ? And are 'scientific medical men' to ask for certificates of honesty all round before they will enter into fellowship with one another ? You know that to ask for proof of honest intention in regard to other matters for scientific experiment would be looked upon as an intended insult, and we cannot help feeling that your side intend it as an insult to us. Do you suppose that the public believe you when you denounce us as dishonest, fraudulent, and unworthy to be regarded as members of an honourable profession ? Of course, you know well they do not ; but there is little doubt that the loss of consideration of the medical profession generally in the eyes of the public is, in a great measure, caused by the habit your side has so long indulged in of denouncing as dishonest and disreputable some of your colleagues for no other obvious reason than that they differ from you on some points of the therapeutic doctrine and practice. This habit of bearing false witness against your brethren (for you know it is false to assert that our average morality and honesty are inferior to your own) cannot be indulged in without lowering the moral tone of those who practise it; and the whole profession suffers from this plan of making a question of therapeutics one of ethics, and assuming that a given method of practice is fraudulent, in place of experimentally testing its value.

"53, Montagu Square, "Your obedient servant,
"10th September, 1874." "R. E. Dudgeon, M. D.

The evidence brought forward by Dr. Dudgeon in his first letter shows conclusively that the homœopathy condemned by the colleges and societies was the theory and practice of homœopathy and not the dose alone; indeed in none of these fulminations is the dose ever alluded to. If the dose was meant we cannot be expected to discover the hidden meaning of the authors. We knew that we as individuals were condemned and shut out from professional intercourse, and we were justified in concluding that we were thus treated because we contended for the truth of the homœopathic therapeutic principle, and because we regulated our practice by it. For we have ever held that the principle *similia similibus* is the cardinal point and not the infinitesimal dose, and we follow it as the mode of discovering and applying remedies for disease. Moreover we have never advocated sectarian exclusiveness, and we admit the utility of all other therapeutic methods experience has shown to be good, and hold ourselves free to make use of them when we think they will be advantageous for our patients, and when they are not superseded by the superior excellence of the homœopathic specific method; just as the ligature superseded the previous methods of stopping hæmorrhage; and if experience shall show that acupressure is better than ligature we would adopt it in practice. If any one will show us a better method of treating disease than the homœopathic we will give up homœopathy.

We do not follow in a slavish manner the mode of applying the homœopathic law used by Hahnemann, but we criticise him as freely as any other man.

As to the dose; before *we* ever heard of homœopathy some of the practitioners of that school were in the habit of giving doses only moderately below the strength required to elicit the physiological action of the drug; others pushed the dilution to what the first party deemed an extravagant length, and even held that the very extreme of dilution was the corner stone of homœopathy, and that to give medicines in the lower dilutions was allopathising. As a matter of fact we side with the former party, but we profess ourselves unable to draw the line where moderate dilution ends and extravagant infinitesimalism begins. Assuredly we hold it to be dishonorable, unscientific, and unprofessional to speak of those who carry the dilution of medicines to what is in our eyes an impracticable point as liars, cheats, and impostors unfit to associate with.

No doubt the *Medical Press* thinks it has a right to look upon us in the same light as we do the extravagant dilutionists. But how does it draw the line between infinitesimalism and sufficient dilution to avoid the physiological action which is essential to all homœopathic treatment, and which must be also deemed essential by the *Medical Press* now that it assures us that *similia similibus* is already admitted as a principle (among others) in medicine. Even if it can, on what ground does it call liars, cheats, and quacks, all who do not possess that power, the secret of which has not been divulged by the *Medical Press*?

The position of the *Medical Press* is in truth somewhat amusing. It says virtually, nobody objects to us for following any theory of medicine, such as the homœopathic. For itself, it thinks the theory visionary and absurd, and the people who follow it fools. But that is no objection to them; far from it. Are there not fools and visionaries enough in medicine, even in high places? Indeed it seems to parody the scriptural phrase, "Ye suffer fools gladly, seeing ye yourselves are wise." But then its wisdom consists in knowing exactly the boundary between infinitesimalism and proper dosage; and, puffed up with this knowledge, it declares everybody a liar who humbly says he does not possess this knowledge and believes that it cannot be attained without scientific experiment.

If a man of position, such as the late Professor Henderson, comes forward and declares that he does not know *à priori* whether the millionth part of a grain of *Arsenic* will be sufficient to cure a case of gastro-enteritis, which it is granted it will cure in some dose, but that the point must be ascertained by careful experiment openly performed according to the strict rule of science, then the world knows how to appreciate such a declaration and will perceive that it is the declaration of a man of science and of honour, and of one who has the proper high idea of the professional duty of a member of a profession who accepts the care of the health and life of his fellow creatures as a sacred trust. But when an anonymous writer in an allopathic medical journal declares that for making that statement Dr. Henderson is a dishonest man and a cheat, and must be thrust out of communion with the profession in company with all who are so banished for infamous and felonious acts, then the public will assuredly hold the latter declaration to come from a foul-mouthed slanderer, and one who has no true professional feeling, nor is a man of science, nor a gentleman. And when such a declaration is endorsed by the whole of the allopathic medical profession by means of their periodical literature, the edicts of their colleges and the laws of their societies, the same verdict will be pronounced by the public on the orthodox majority of the profession.

It is an indubitable fact, and the enlightened portion of the public are beginning to perceive it, that we are following out the only method of gaining for medicine the fruits of the homœopathic principle, namely, by experiment as men of science and honour. The whole profession must perforce follow our way, for there is no other; and the only question is, whether they will do so sooner or later, whether honestly or dishonestly. As yet the majority are lagging behind, but they are slowly following us, and, unfortunately, not honourably by giving Hahnemann the credit due to him for his discovery of the principle and for his hard-working pioneering in the arduous labour of proving medicines. The new phase of the question is most embarrassing to our old school colleagues. While the truth of the homœopathic principle is forcing itself on the profession, the difficulty they now have is to reconcile their conduct with their former unworthy treatment of ourselves, and their false pride leads them to endless paltry subterfuges. This device of the *Medical Press* is one of these. In spite of the general and repeated denunciations of homœopathy, which included the principle, the tactics now pursued are to pretend that the principle was not objected to, but only the infinitesimal dose, and to prove their consistency this is now made the excuse for the reiteration of all the accustomed, coarse, and unworthy vilification of colleagues the fruits of whose honest labour they are meanly appropriating without acknowledgment.

The truth is, something must be said to show their zeal, for they are all in mortal fear of one another. The journals fear for their circulation unless they revile homœopathy. The publishers fear for their pockets. The private practitioners fear being denounced by the trades'-union clubs, miscalled ethical societies. The students fear lest they should be plucked. The young aspirants to hospital appointments fear lest they should be excluded from the object of their honourable ambition. The so-called "eminent men" fear loss of consultation fees and operations. The apothecaries fear loss of custom. In short, the whole profession, from top to bottom, is writhing under a veritable *Reign of Terror.* The very leaders of the medical profession, the eminent men in high positions, are themselves under the influence of the terror, and either give no guidance on the subject of homœopathy or pander to the prejudices of those on whom they depend for consultations by joining in the senseless hue and cry of the medical mob, and lend the authority of their high status to aggravate and intensify the persecution. There are some conspicuous exceptions who will not demean and dishonour themselves by persecuting their colleagues for their medical opinions, and who will not deny professional intercourse to their differently thinking colleagues ; but none even of these will make an effort to stem the tide of persecution by publicly claiming for all a perfect right to freedom of opinion and action in medical matters. Few really eminent men exist in any profession in each generation, and the posts of honour and eminence are in most cases filled by the Dr. Plausibles, who are eminent only in the eyes of the flunkey-tribe, and who, under the present Reign of Terror, could only attain to their high positions by conforming to the vulgar practice of treating homœopathy as a fraud and its practitioners as scoundrels.

The Reign of Terror is founded on falsehood, and would be dissipated in a moment if a few even of the "eminent men," such as they are, would boldly strike for freedom and insist on being allowed free discussion on this as on every other subject. At once the whole fabric of terror and falsehood would collapse. The sectarian position at present falsely thrust upon us would disappear. The name of homœopathy would even disappear in a short time. For ourselves, we have each individually repeatedly offered, and we now again collectively offer, to give up this Journal, of which we are the editors, as soon as complete freedom of medical writing is guaranteed for all, for homœopathic theory and practice as well as for others. There never should have been any separate homœopathic literature. Its very existence is a standing disgrace to the medical profession. It is unworthy of a body professing to be men of science and gentlemen to say that no one can propose a new theory and practice in the ordinary channels of the press or in medical societies without being hooted out of discussion with vulgar impertinence, the pages of medical journals closed against him, and the medical publishers placing him under a ban in consequence of the "picketing" manœuvres resorted to by their customers.

The all-pervading power of medical obstructiveness or the utter indifference to medical matters of the leaders of public opinion is shown in this, that though this persecution for opinion has been going on in England for a whole generation, scarcely one feeble voice has been raised in the non-medical press to censure a line of conduct that in other professions would be visited by the severest condemnation. While in general terms persecution for opinion is a stock subject of animadversion, such a persecution has been going on under the eyes of all without eliciting anything more than a time-honoured joke about doctors' differences. But what we complain of, and what we have endured all these years, is no mere doctors' differences, but a steady, bitter, and cruel oppression of a weak minority by a powerful majority, and that for merely proposing and practising what experiment carefully and scientifically conducted has taught us to be the right method. And though, in order to furnish some sort of justification of this persecution, we are denounced as ignorant charlatans and mere pretenders to medical knowledge, this accusation is, as those who make it know, as unfounded as their charges of dishonesty and falsehood ; for many of those who have enrolled themselves in our ranks have earned the highest distinction as students, and have borne off the gold medals and other rewards of conspicuous merit and acquirements at the colleges and schools of medicine. Some, too, like Henderson, have earned a first-class reputation as original discoverers in pathological science, and as a body the practitioners of homœopathy have cultivated with more than average success and distinction other branches of science bearing more or less on medicine. We need hardly say that the legal qualifications of the persecuted minority are identical with those of the persecuting majority. It is these men who for a matter of opinion, are branded by their differently thinking colleagues as unworthy of fellowship, as destitute of truth and honour, and the practical outcome of these calumnies is, that we are expelled and excluded from medical societies, denounced by colleges, insulted by having our hardly-earned diplomas refused or demanded back, our articles excluded from the medical journals, our works rejected by medical publishers. And the chief organs of public opinion see all these enormities going on under their very noses and say nothing.

What an outcry would be raised were a majority in the Church to attempt to persecute a differently thinking minority by reviling them as hypocrites and liars, and by depriving them of all posts of honour and emolument. How the thunders of the press would be directed against an association of engineers who should exclude from their society and declare unworthy of professional intercourse any of their members who should propose to supersede the traditional methods of producing mechanical power by some safe, cheap, and more effectual process. And yet these things, and worse, are perpetrated daily by the dominant majority of the profession on a minority of their colleagues who have had the honesty to recommend what they believe and know, by carefully conducted scientific experiment, to be a better method of treatment than the traditional one, and even while they persecute they plagiarise the very method they denounce and affect to despise. The following excellent leading article from *Figaro* of 9th September gives us hope that the apathy of the newspapers is about to give place to a livelier interest in a matter which concerns the general public at least as much as theology or mechanical science.

"MEDICAL INTOLERANCE.—The progress of the art of healing has been exceedingly slow. There are very many diseases and very few specifics. The diagnosis of one doctor will be flatly contradicted by another doctor ; and a candid physician will admit that when he first prescribes for a patient his prescription is merely tentative. Far be it from us to charge the profession with incompetence or negligence. We know that men endowed with the finest intellects and of unflagging zeal have devoted their lives to the study and practice of medicine. Disease is very subtle, and generally the physician has to work in the dark. But we do complain of medical intolerance, because it is not only ungracious in itself, but hinders the development of the healing art.

"If a doctor discovers something new about the character of a disease, or an effective treatment, he is forthwith denounced as a quack. Most likely he will be professionally ruined ; or, if he is fortunate enough to have a practice, in spite of his daring to be more clear-sighted than the rank and file, he is insulted, calumniated, and cold-shouldered by the profession. After a time his remedy may be adopted, but his merit is never acknowledged. When it was no longer possible to deny the circulation of the blood, Harvey was sneered at as an impostor, and a spiteful doctor said, 'Oh, Harvey has only circulated the circulation.' So, if any one discovered the nature of gout, and a remedy for that disease, he would be hooted by the profession, and when his remedy was adopted, the profession would say, 'So-and-so only pretended to an exclusive knowledge of what we all knew.

"Thinking only of the pecuniary welfare of a man entering the medical profession, we should earnestly advise him to avoid originality, and if he made a discovery, to keep it secret. Better for him to kill, *secundum artem*, than to cure by a novel remedy.

"Our attention has been directed to the ungenerous treatment of homœopaths by allopaths. We offer no opinion upon the merits or the demerits of homœopathy. Such a discussion would be unsuitable for our columns. The *Homœopathic Review* remarks that the allopaths refuse to meet homœopaths in consultation at the bedside, or to admit them to medical societies, or to allow them to fill public professional appointments. Now, we say that a candid allopath must admit that there is no justification whatever for such conduct.

"The homœopathic physician is as well educated as the allopathic physician, and he has to deal, and does deal, with the same symptoms and the same diseases. The main differences between the two systems are, that the homœopath thinks that, in the doctrine of *similia similibus curantur*, he has the key to certainty, or an approximation to certainty, in his treatment. The other difference is, that the homœopath does not administer drugs in their crude forms, and holds that small doses are more efficacious than large doses.

"The *Medical Press and Circular* of the 19th August says that the medical profession (that is, the allopathic branch) 'regards with the most perfect toleration the theory and practice of *similia similibus*.' Well, that was not always the case, and the *similia similibus* doctrine was derided by the allopaths. To be sure, there is nothing in the theory to offend the allopaths. For the homœopaths act strictly on experiment. They do not prescribe a certain medicine because to do so would accord with a theory, but they prescribe a medicine because they know its effects by observation. The allopaths will not deny that the theory of *similia similibus* is very often true, and a homœopath would not hesitate to prescribe a medicine because it did not square with the aforesaid theory.

"As to the infinitesimal dose theory, the homœopaths hold to it without blind bigotry. They say they try it and find it efficacious. They say that they think it more efficacious than the allopathic plan of administering large doses of drugs in what they call a crude form; but they do not say that the allopathic doses are always inefficacious. They do not say that the disease cannot be cured by allopathic doses; all their contention is, that the homœopathic system is the best.

"If allopaths do not admit the soundness of the *similia similibus* theory, they accept the results of it; and whether the theory is true or false, whether it is or is not the key to the solution of the problem of greater certainty in the treatment of disease, there is nothing in it to prevent the homœopath being met in consultation by the allopath. As to the doses, there is a difference; but it is not the difference between art and quackery. The homœopath does not perscribe nostrums. The homœopathic physician, like the allopathic physician, prescribes according to his judgment of the symptoms and constitution of the patient.

"Is it not, then, most intolerant for the allopaths to refuse to meet the homœopaths in consultation? Beyond question, allopathic doctors differ from each other as widely as it is possible for allopath and homœopath to differ. The whole community, as well as the profession, suffer from the unjustifiable intolerance. In this matter, at all events, we are free from bigotry, and we are confident that, if allopaths did not hold aloof from the homœopaths, both one and the other would be benefited, the noble art of healing would be more rapidly improved, and suffering humanity would have cause to rejoice at the reunion of the medical profession."

The members of the medical profession, who have tested and after trial have adopted the homœopathic system, have long borne—

"The oppressors' wrong, the proud man's contumely,
The insolence of office, and the spurns
That patient merit of the unworthy takes;"

and they can bear these evils still longer if necessary, only it is hard to convince them that they are necessary evils. True they are the pioneers of a great reform in medicine, and as such they cannot escape persecution,

"For sufferance is the badge of all our tribe."

But persecution is surely continued beyond its legitimate bounds—if it have any legitimate bounds, perhaps we should rather say its conventional bounds—when our persecutors are speaking the very language and employing the very remedies for speaking and employing which they have been persecuting us for more than a generation.

En attendant the good time coming, when persecution shall cease and co-operation commence, we go on slowly but continually improving our Materia Medica. When our self-constituted opponents shall abandon their present system of adding to their Materia Medica by unscientific empirical trials of new drugs on the sick or by pilfering from our stores, and shall join with us in the endeavour to perfect rational pharmacodynamics, the work which we are at present left to perform alone will go on with tenfold rapidity, and the patient-world will reap the benefit of our united labours.—*The British Journal of Homœopathy*, October 1874.

Correspondence.

To the Editor of the Calcutta Journal of Medicine.

MY DEAR SIR,

I have to-day received your numbers for June & July 1874.

Accept my grateful acknowledgments for the attention you have given to the suggestion thrown out in the address to the Congress at Leamington last year relative to antidotes for serpent venom.

Dr. Fayrer has shown that no antidotes to these deadly poisons are yet known; and you rightly observe that "scientific men ought not to rest, till an antidote or antidotes have been discovered."

The experiments you have made, and your observations upon them, are highly interesting; and your remark that "sickness has prevented you pursuing the subject" calls for both our regret, and our sympathy; and our hope that restored health will enable you to resume the investigation.

Will you permit me to add one remark. In the hypothesis suggested I mention the third dilution as the lowest to commence the experiments with. By this I meant the third *centesimal*. You have begun with the third *decimal*. There is a wide difference between the thousandth and the millionth part of a drop of the poison.

The remedy should be given, not before the bite, but as soon as may be after the poison has begun to act.

Believe me
Faithfully Your's

Rugby,

November 17th, 1874.

WILLIAM SHARP.

We have to tender our best thanks to the Editors of the following Periodicals for regularly exchanging with us :—

The Indian Medical Gazette.
The British Journal of Homœopathy (H. Turner & Co., London).
The Monthly Homœopathic Review (H. Turner & Co., London).
The American Jornal of Homœopathic Materia Medica.

The United States Medical and Surgical Journal.
The American Homœopathic Observer.
The Western Homœopathic Observer.
The American Homœopathist.
The New England Medical Gazette.
El Criterio Medico (Madrid).
La Reforma Medica (Madrid).
La Homœopatia (Bogota).

(We have not received these Journals for some time past.)

The Indo-European Correspondence.
The Hindoo Patriot.
The Bengalee.
The Indian Mirror.
The Bengal Times (formerly *The Dacca News*).
Native Opinion (Bombay).
The Englishman : Saturday Evening Journal.
The Indian Daily News.
Mookerjee's Magazine. (New Series.)
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The Oudh Excelsior.
Sir William Jones' Works. (*Publishing in Series.*)
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